

JAN 19 2005

UNIVERSITY OF CALIFORNIA

RESOLUTION NO. 4027

RESOLUTION OF THE COUNCIL OF THE CITY OF
LA HABRA ADOPTING THE CITY'S SOURCE REDUCTION
AND RECYCLING ELEMENT PURSUANT TO THE CALIFORNIA
INTEGRATED WASTE MANAGEMENT ACT OF 1989, FOR THE
REDUCTION OF THE AMOUNT OF SOLID WASTE GENERATED
WITHIN THE CITY.

WHEREAS, the California Integrated Waste Management Act of 1989, (Assembly Bill 939 and its amendment Assembly Bills 1820 and 2707) was established, which requires that the City of La Habra prepare, adopt and submit to the County of Orange a Source Reduction and Recycling Element ("SRRE") that proposes programs to reduce or recycle twenty-five (25) percent of the City's solid waste currently landfilled by January 1, 1995, and fifty (50) percent or as much feasible by the year 2000; and

WHEREAS, pursuant to Public Resource Code Division 30, Sections 40000 et seq., which provides the legal authority and requirements of Assembly Bill 939, Assembly Bill 1820 and Assembly Bill 2707, the City of La Habra held a duly noticed public hearing on April 2, 1991, on the City of La Habra's Preliminary Draft SRRE and also obtained written comments during the public comment period; and

WHEREAS, pursuant to Title 14, Division 7, Chapter 9, of the California Code of Regulations, the City of La Habra has conducted a second public hearing, on June 25, 1991, on the City of La Habra's Final Draft of the SRRE and the City Council has considered all the comments of the members of the Council, the public and other reviewing agencies;

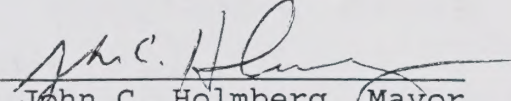
NOW THEREFORE, the Council of the City of La Habra hereby resolves as follows:

SECTION 1: The City Council has considered and hereby approves Negative Declaration 90-13, prepared for the SRRE and finds that the project will not have significant environmental effects, as shown in said Negative Declaration, for the purposes of the California Environmental Quality Act.

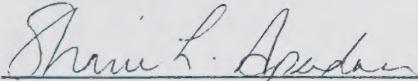
SECTION 2: The City Council hereby approves the SRRE attached hereto as Exhibit "A" and made a part of hereof by this reference.

SECTION 3: The City Council hereby directs the City Manager to transmit the SRRE on behalf of the City of La Habra to the County for incorporation into the countywide Integration Waste Management Plan.

PASSED AND ADOPTED, this 25th day of June, 1991.


John C. Holmberg, Mayor

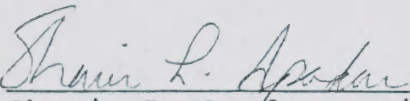
ATTEST:


Sharie L. Apodaca, City Clerk

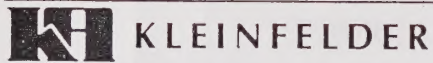
I, Sharie L. Apodaca, City Clerk of the City of La Habra, do hereby certify that the above and foregoing is a true and correct copy of Resolution No. 4027 , introduced and adopted at a special public meeting of the City Council of the City of La Habra held on the 25th day of June, 1991 by the following vote:

AYES:	COUNCILMEMBERS:	Mahoney, Flora, Garcia, Holmberg
NOES	COUNCILMEMBERS:	None
ABSENT:	COUNCILMEMBERS:	Cheverton
ABSTAIN:	COUNCILMEMBERS:	None

Witness by hand and the official seal of the City of La Habra this 25th day of June , 1991.


Sharie L. Apodaca, City Clerk

Dated: June 25, 1991



FINAL DRAFT

CITY OF LA HABRA SOURCE REDUCTION AND RECYCLING ELEMENT

Volume I

Prepared for

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May 28, 1991

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**SOURCE REDUCTION AND RECYCLING ELEMENT
FOR THE
CITY OF LA HABRA**

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- B** Criteria for Program Evaluation
- C** Markets for Recycled Materials
- D** Solid Waste Generation Study
- E** Application for Authorization to Use

VOLUME II

Technical Appendix

Financial Statement

1	Revenue	1000000
2	Cost of Sales	(500000)
3	Gross Profit	500000
4	Operating Expenses	(200000)
5	Operating Income	300000
6	Interest Expense	(50000)
7	Income Before Tax	250000
8	Income Tax Expense	(75000)
9	Net Income	175000
10	Dividends	(50000)
11	Retained Earnings	125000
12	Total Assets	1000000
13	Liabilities	400000
14	Equity	600000
15	Current Assets	500000
16	Non-Current Assets	500000
17	Current Liabilities	200000
18	Non-Current Liabilities	200000
19	Share Capital	300000
20	Reserves	300000
21	Retained Earnings	125000
22	Dividends Payable	(50000)
23	Income Tax Payable	(75000)
24	Accounts Payable	(100000)
25	Accounts Receivable	(200000)
26	Inventory	(100000)
27	Prepaid Expenses	(50000)
28	Depreciation	(50000)
29	Intangible Assets	(50000)
30	Goodwill	(50000)
31	Investments	(50000)
32	Property, Plant & Equipment	(500000)
33	Accumulated Depreciation	(500000)
34	Deferred Tax Liabilities	(50000)
35	Other Liabilities	(50000)
36	Other Equity	(50000)
37	Other Assets	(50000)
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98	Other Liabilities	(50000)
99	Other Equity	(50000)
100	Other Assets	(50000)

EXECUTIVE SUMMARY

Introduction

The City of La Habra has prepared a Source Reduction and Recycling Element (SRRE) in accordance with the California Integrated Waste Management Act of 1989. The purpose of the plan is to reduce the amount of solid waste generated within the jurisdiction of the City by 25 percent by the year 1995, and 50 percent or as much as feasible by the year 2000. The plan addresses four major components: source reduction, recycling, composting, and special wastes. These components were developed using a model component format provided by the State. Other support sections include: goals and objectives, waste generation analysis, public education and information, disposal facility capacity, funding, and plan integration. These sections were developed using specific criteria provided by the State. Implementation schedules are attached at the end of each appropriate section.

Goals and Objectives

The specific goals and objectives developed within each component were summarized in Section 2. This was done in compliance with State requirements and to help focus the purpose and intent of the plan in one section.

Waste Generation Analysis

Studies were conducted by the County of Orange and the City to determine current waste disposal, diversion, and generation quantities. The City studies were designed to supplement information provided by the County. Because the data from the County conflicted with City studies for waste disposal and diversion, a modified analysis was produced to reflect actual conditions as closely as possible (Section 3, SRRE).

For current waste generation, diversion, and disposal see Table 3-2 (Disposal - 1990), Table 3-3 (1990 Diversion through Recycling), Table 3-4 (Generation, Disposal, and Diversion - 1990) and Tables 3-5 and 3-6 (Disposal Characteristics - 1990). For planning purposes, diversion is estimated at 21,677 tons out of a generation rate of 100,309 tons for 1990 (21.6%).

The diversion quantity does not include diversion of inert solids. The waste diversion study completed by the County credited the City with about 69,000 tons per year of allocated recycled inert wastes. The inert materials were allocated to each City based upon population. Because the materials distorted the waste generation and diversion analysis, they were eliminated from the generation and diversion quantities for the purpose of producing a plan which adheres to the intent of the California Integrated Waste Management Act of 1989.

Source Reduction, Recycling, Composting, and Special Wastes

Within each of the major components, the City researched existing conditions, identified and evaluated various alternative programs, selected programs for implementation, and identified implementation, and monitoring and evaluation methods for each program selected. Specific goals and objectives were developed to guide the implementation process.

Programs Selected

Selected programs and diversion goals include:

- Source Reduction: 3.3% diversion by 1995 and 5.3% by 2000.
 - Awards and public recognition
 - Non-procurement programs
 - Solid waste reduction business plans
 - Educational programs
 - Waste evaluations
 - Technical assistance for business
 - Local procurement policy
- Recycling: 31% by 1995 and 36% by 2000
 - Unstaffed drop-off center promotion
 - Certified recycling center promotion
 - City agency recycling program
 - Salvaging

- Composting: 0% by 1995 and 8.1% by 2000
 - Curbside collection program
 - Centralized waste processing program
 - County-owned processing and composting facility

Public Education and Information

Several public education programs were identified and selected for implementation. These programs are designed to assist implementation of the source reduction, recycling, composting, and special waste programs selected and are considered very important for the success of the plan.

Disposal Facility Capacity

Section 9 was prepared in accordance with State requirements, yet did not apply to the City since there are no solid waste disposal facilities (landfills) located within its jurisdiction (refer to Table 9-1 - Disposal Facility Capacity Needs).

Funding

The programs selected for implementation will require specific revenues and revenue sources. These were identified within Section 10. See Table 10-1 for costs to the City for administration of the SRRE program. Costs to generators for yard debris pick up and other additional services are not shown.

Plan Integration

This section summarizes the entire plan by listing how the selected programs will combine to achieve the 25 and 50 percent solid waste diversion requirements.

The first of these is the fact that the
 population of the country was
 increasing rapidly, and the
 demand for land was becoming
 more and more urgent.

The second is the fact that the
 government was in a position to
 grant large tracts of land to
 individuals and corporations.

The third is the fact that the
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 government was in a position to
 grant large tracts of land to
 individuals and corporations.

Section 1

Introduction

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

10/10/2020

10/10/2020

10/10/2020

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SECTION 1 INTRODUCTION

1.1 Global Perspective on Waste Generation

In 1988, over 38 millions tons of solid waste were produced in the State of California, 90 percent of which was disposed of in landfills. This amounted to more than 2,500 pounds of solid waste for each person living in the State, which is more than any other State in the country and is over twice the per capita rate of most other industrialized nations in the world (Table 1-1).

TABLE 1-1
DAILY PER CAPITA WASTE GENERATION
COUNTRY-WIDE SURVEY

Country/State	Daily Per Capita Pounds
California	7.0
United States	6.5
West Germany	2.5
Sweden	2.5
Switzerland	2.4
Japan	2.2
Norway	1.7

Source: Inform, Inc. 1987

The landfills in California will exhaust most of their capacity by the mid 1990s. These landfills also pose a potential public health threat from soil, air, and groundwater pollution.

The amount of solid waste generated in California, coupled with the diminishing landfill space and potential adverse environmental impacts from landfiling, constitutes an urgent need for State and local agencies to enact and implement an Integrated Solid Waste Management Program.

1.2 Integrated Solid Waste Management Program

Integrated Solid Waste Management involves using a combination of technologies and programs to manage the municipal waste stream. An integrated system is designed to address a specific set of local solid waste management problems. Integrated system operations are based on local resources, economics, and environmental impacts. The system may use several individual programs that handle targeted portions of the municipal waste stream. These programs are designed to compliment each other and address source reduction, recycling, composting, environmentally safe waste transformation, and environmentally safe land disposal.

The purpose of the Integrated Solid Waste Management Program is to:

- reduce, recycle, and reuse solid waste generated in the State of California to the maximum extent possible;
- improve the regulation of existing solid waste landfills;
- ensure that new solid waste landfills are environmentally sound;
- streamline permitting procedures for solid waste management facilities, and;
- specify the responsibilities of local governments in developing and implementing Integrated Solid Waste Management Programs.

1.3 Legislation

In 1989, the California State Legislator declared the responsibility of solid waste management to be shared between the State and local governments. Thus, the California Waste Management Act of 1989 (Assembly Bill 939, and its amendment Assembly Bills 1820 and 2707) was established. This act requires the State of California to require local agencies to make adequate provisions for solid waste handling within their respective jurisdictions by promoting:

- Source reduction
- Recycling
- Composting
- Environmentally Safe Waste Transformation, and
- Environmentally Safe Land Disposal

The Act also directs local agencies to maximize the use of source reduction, recycling, and composting technologies to reduce solid waste quantities by 25 % by 1995 and by 50 % or as much as feasible by 2000.

1.4 Legal Authority and Planning Guidelines

The Public Resources Code (PRC), Division 30, Sections 40000 through 41955, provides the legal authority and requirements of Assembly Bill 939 (AB 939), Assembly Bill 1820 (AB 1820), Assembly Bill 2707 (AB 2707), and Title 14, California Code of Regulations (CCR). Title 14, California Code of Regulations, Division 7, Chapter 9, Articles 3, 6.1, 6.2, 7 and 8 provides the planning guidelines and procedures for preparing and revising both the city and county Source Reduction and Recycling Elements (SRREs) , and county Integrated Solid Waste Management Plans. This document has been prepared in compliance with those regulations and published guidelines.

1.5 Source Reduction and Recycling Element

Each city in the State of California must prepare and adopt a Source Reduction and Recycling Element (SRRE) on or before July 1, 1991 for all incorporated areas within its jurisdiction, and each county in the State must prepare and adopt a similar Source Reduction and Recycling Element on or before July 1, 1991 for all unincorporated areas within its jurisdiction. These elements must comply with the California Environmental Quality Act (CEQA) pursuant to the Public Resources Code section 21000, and must include the following components:

- Waste Characterization Component
- Source Reduction Component
- Recycling Component
- Composting Component
- Special Waste Component
- Education and Public Information Component
- Disposal Facility Capacity Component
- Funding Component, and
- Integration Component

1.5.1 Public Hearings and Meetings

Development of the City's SRRE must be guided by an effective planning process including participation of the general public, government agencies, and private industries. Methods to involve these parties will be public hearings and informative meetings that are advertised in local newspapers 30 days in advance of the hearing or meeting. At these hearings and meetings, the general public, affected governmental entities, and private industries shall be granted the opportunity to respond to the city's objectives, policies, and actions.

1.5.2 County Local Task Force (LTF)

Each county in the State of California must have established a Local Task Force (LTF) on or before March 1, 1990 to assist the cities in coordinating the development of their Source Reduction and Recycling Elements. That LTF is also responsible for development of the County Integrated Solid Waste Management Plan (CoISWMP). The cities' SRRE plans and the county's SRRE plan will be incorporated into the CoISWMP.

1.5.3 California Integrated Waste Management Board (CIWMB)

The CIWMB was established to monitor local government compliance with the regulations of Assembly Bill 939, its amendment Assembly Bills 1820 and 2707, and Title 14 CCR, and to review and approve the cities' and counties' Source Reduction and Recycling Elements, and the counties' Integrated Solid Waste Management Plans.

1.5.4 Review Process

The City of La Habra will submit a preliminary draft of its Source Reduction and Recycling Element to the adjoining cities of La Mirada, Whittier, Fullerton, La Habra Heights and Brea; the Orange County Solid Waste Management Department; the Southern California Association of Governments (SCAG); the Local Task Force; and the California Integrated Waste Management Board. These agencies will have a maximum of 45 days to review the plan from the time of submittal.

The City of La Habra will send, 45 days prior to the public hearing for the adoption of the Source Reduction and Recycling Element, a copy of its final draft SRRE to the Local Task Force for review.

1.6 City of La Habra Background Information

Several factors influence the development of a SRRE. Each city has social, physical, and infrastructural variables that mandate a unique approach to SRRE development. The following discussion identifies those variables with some conclusions drawn in Section 1.7

1.6.1 General Information

1.6.1.1 County Influences

La Habra is located in Orange County, California. The climate is characterized by two mild temperature seasons which is the primary reason for a large influx of residents to the County. In 1990, the population was 2.27 million and is expected to reach 2.5 million in 1995. The projected population for 2005 is 2.7 million.

Orange County is a prosperous county; only 3% of the population were unemployed in 1989. Orange County is the fifth wealthiest county in the United States (\$1.34 billion in General Revenue Fund). The relative prosperity of a county indicates a relative waste generation rate: the greater the consumption, the higher the waste production.

1.6.1.2 City Influences

The City of La Habra is located between the hills of La Habra Heights and the smooth lands of Fullerton, hence its name meaning "a pass through the hills." La Habra has grown from a citrus community to a centrally located community within the Los Angeles-Orange County metropolitan area. The city is 99% developed: 54.77% of the land use is residential, 17.61 % is industrial, and 8.76% is commercial with the remainder in streets, public use, and open space. The sphere of influence of the City of La Habra covers 7.3 square miles as designated by the Local Agency Formation Commission. This area is also referred to as the total planning area and is covered by the General Plan.

The population of La Habra in 1990 was approximately 51,266 (1990 census) with close to one-third of the population under 24 years. The median education is 12.8 years and the per capita income is \$15,576. The age and median education indicate how a public education campaign may be best directed, e.g. a school education program beginning with kindergarten may be an effective way to influence medium-term and long-term waste-related behavior. Per household income is approximately \$42,119.

In 1989, 18,644 housing units were available: 10,500 single family residences and 7,503 apartment/multi-unit residences (La Habra General Plan 2020). The amount of waste generated from a residence generally varies with the size, where larger residences typically produce more waste than smaller ones.

The estimated employment in La Habra is 19,600. The largest employer, the Alpha Beta distribution office, is also the largest employer of Orange County, employing over 4,000 people. Other major employers in La Habra are Chevron USA Field Research (1,100 employees) and Beckman Instruments (700 employees) (Focus: Orange County, 1990). Many of the large businesses have source reduction and recycling measures in place.

Because La Habra is already nearly built out, the City is not expected to experience significant changes in population, housing, or employment during the next ten years. The following table (Table 1-2) shows expected population and housing changes developed from the U.S. Census Bureau, the Orange County Preferred Projections (OCP-88) and increases in entitlements. Changes to the commercial/industrial sector are expected to be small but increasing from new commercial developments based on preliminary designs submitted to the City. These data will be considered when estimating waste generation, diversion, and disposal estimates in Section 3 for 1990 and in Section 11 for 1995 and 2000 (Table 1-2).

TABLE 1-2
POPULATION, HOUSING AND COMMERCIAL PROJECTIONS
1990 THROUGH 2005
LA HABRA

Year	Population	Population % Change	Housing	Housing % Change	Commercial & Industrial Added Sq. Footage	% Change
1990	51,266		18,644			
1991	51,323	0.19	18,706	0.33	138,811	0.92
1992	51,421	0.19	18,768	0.33	0	0.00
1993	51,519	0.19	18,830	0.33	75,477	0.38
1994	51,616	0.19	18,893	0.33	0	0.00
1995	51,714	0.19	18,955	0.33	0	0.00
1996	51,471	-0.47	19,017	0.33	58,400	0.95
1997	51,230	-0.47	19,079	0.33	18,000	0.56
1998	50,989	-0.47	19,141	0.33	189,000	1.25
1999	50,749	-0.47	19,203	0.33	0	0.00
2000	50,511	-0.47	19,265	0.33	80,000	0.99
2001	50,506	-0.01	19,327	0.33		
2002	50,500	-0.01	19,390	0.33		
2003	50,495	-0.01	19,452	0.33		
2004	50,490	-0.01	19,514	0.33		
2005	50,485	-0.01	19,576	0.33		

1990 population from U.S. Census Bureau

Population percent change from OCP-88

Housing from La Habra General Plan 2020

Housing percent change from La Habra Planning Department

Commercial and Industrial square footage change from La Habra Planning Department

1.6.2 Waste Collection and Disposal Service

The City of La Habra has a contractual agreement with Western Waste to collect and dispose of solid waste generated within the City of La Habra. Western Waste provides these services to single family residences, multi-family units, commercial, and industrial customers. Western Waste uses 8-ton side loaders and 10-ton front loaders (total of six trucks) to collect the wastes from the entire city. Wastes from the commercial sector are collected in 1.5, 2, 3, and 6 cubic yard (c.y.) containers. Drop-off boxes are available in 25 and 40 c.y. sizes. Of the commercial and industrial sectors, notable generators include: Alpha Beta, Beckman, and Chevron USA. These businesses represent significant influences in waste generation and diversion.

Approximately 48 percent of the City garbage service is can pickup. This is loosely viewed as equivalent to the number of single family residences that are serviced. Twenty-two percent of the residential units are multi-family dwellings with bin service. At the multi-family dwellings, large metal bins are normally used to collect the waste while cans are used for single family units, duplexes, and other small units.

A total of 56,171 tons of waste collected from La Habra were disposed of at the Orange County (Olinda) Landfill in 1990. See Section 3.3.1 for discussion of the disposal rate.

1.6.3 City of La Habra's Role in Waste Collection Service

The contract between the City and Western Waste has two major subdivisions: (1) curbside collection, and; (2) bin services for commercial and multi-family customers. The bin service is further divided into: (a) service with regular pick up and; (b) drop-off or roll-off containers ordered for service at a location for a limited length of time, i.e. construction sites.

In the curb collection service, the City bills and collects from the user and compensates Western Waste on the basis of the number of units served. The number of garbage cans a generator may set out is unlimited. The cans are owned by the generator. For the bin service, Western Waste bills and collects from the users. In June, 1990, the City Council agreed to amend the contract to include recycling services.

Although actual collection and disposal services are performed by Western Waste, the fundamental responsibility for these services lies with the City. Chapter 5.44 and Chapter 8.04 of the City ordinance address the standards and restrictions that shall be adhered to by citizens and by the waste contractor.

1.6.4 Waste Diversion

1.6.4.1 Recycling

Curbside collection of recyclables from single family residences began in 1990. Until curbside collection was implemented, waste diversion activities were performed at buy back, drop off, and certified recycling centers and scrap metal dealers. There are a number of drop off centers located in the city. The centers are typically operated by non-profit groups that sell the materials to support their activities.

A few recycling locations and recyclers/scrap metal dealers are also located in La Habra. Some recyclers have exclusive commercial and industrial accounts for specific materials. The recyclers collect the materials from their customers and transport them to markets or to processing facilities. Table 5-2 lists the waste hauler and State-certified recyclers located in La Habra with the materials they recycle, and estimated recycling rates.

The major recyclable commodity picked up from commercial and industrial accounts is cardboard. In 1989, the City Public Services Department performed a survey of most businesses located in La Habra. The survey identified businesses that recycle and which materials were recycled. Through this survey, it appears that 56% of the material is cardboard, i.e. 10,533 tons per year. Note that 7,842 tpy (75%) are generated by Alpha Beta.

1.6.4.2 Composting

The Orange County Waste Diversion Study identified 4,085 tons per year of green and yard waste currently being composted. This included 402 tpy of yard wastes and 1716 tpy of wood waste. No other information has been compiled on current composting activities although it is known that some of the tree trimmings from the City Public Services Department are diverted to landscapers who compost the trimmings and make soil amendments.

1.6.4.3 Incineration

The Orange County Solid Waste Diversion Study identified 351 tpy of wood and yard wastes that are incinerated; 100 tpy of yard wastes and 251 tpy of wood waste. No other information has been compiled on incineration. The source of the material identified in the Study is currently unavailable.

1.7 Summary and Conclusions

The City of La Habra, along with the 450 other cities in the State of California, has been required to prepare a Source Reduction and Recycling Element on or before July 1, 1990, in accordance with the California Integrated Waste Management Act of 1989. Kleinfelder, Inc., in contract with the City of La Habra has prepared this SRRE for the City in compliance with Title 14 CCR, Div. 7, Chap. 9, Art. 3, 6.1, 6.2, 7 and 8.

The existing conditions presented in Section 1 of the SRRE indicate factors that will influence the development of source reduction, recycling, and composting programs and the ability of the City to meet the mandated recycling goals.

Projections for population, housing, and commercial growth have indicated only small changes that will influence waste generation and diversion rates. Certified recyclers, curbside collection, and in-house recycling programs in the private sector currently represent far larger influences. As may be inferred from the compilation of existing recycling activities shown in Tables 5-2, 5-3, and 5-4, La Habra has nearly attained the 1995 mandated goal of 25% diversion of the waste stream.

This indicates that a reasonable approach to developing short- and medium-term goals would be to enhance existing programs and to use them as models for expansion of diversion activities. Private sector programs such as Alpha Beta's may be adapted for use by other businesses and may be used as an example in a public information campaign. Expansion of certified recycling center activities also appears to be an effective goal.

However, to ensure that the mandates are achieved, new programs must be implemented. It appears that the single most effective program would be to direct the wastes from commercial, industrial, and multifamily residences to a materials recovery facility. Even with this measure, fulfillment of the 2000 mandate may require development of other strategies where public education, composting, and source reduction have a larger role.

SECTION 2 GOALS AND OBJECTIVES

Section 2

Goals and Objectives

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

Section 2 Goals and Objectives

Overall
Final Year
Sports Activities and Research Project

Section 1
Sports Activities

SECTION 2 GOALS AND OBJECTIVES

2.1 Introduction

The City has developed a series of goals and objectives within each component designed to achieve the mandate of the Integrated Waste Management Act of 1989. These goals and objectives are a result of analysis and interpretation of existing conditions, opportunities, and constraints. The major goals and objectives developed for the SRRE are summarized below.

2.2 Overall City Goals

Provide an integrated solid waste management system of facilities, services, and community education programs, which emphasizes the source reduction of wastes, recycling of reusable materials, and disposal of remaining solid waste which minimizes potential adverse impacts to public health and the environment and maximizes available landfill capacity.

2.3 Overall City Objectives

- Develop and implement a Source Reduction and Recycling Element (SRRE) program which is technically, socially, financially, and politically feasible.
- Encourage and facilitate public participation in the development and implementation of the SRRE.
- Coordinate the SRRE with applicable local, regional, state, and federal land use, air quality, and water quality regulatory agencies.
- Minimize the environmental impacts associated with solid waste through an integrated solid waste management system which emphasizes an alternative to landfilling.
- Incorporate, where possible, state-of-the-art technology to improve the efficiency and integrity of the solid waste management system.

- Maximize recovery and reuse of materials, and diversion from landfills of solid waste materials generated within the City's jurisdiction.

2.4 Source Reduction Component Goals and Objectives

Each city is required to examine and select specific objectives to be accomplished during the short-term and medium-term planning periods of the SRRE. Based upon this requirement, the City of La Habra has selected the following specific objectives for implementation.

2.4.1 Component Goals

- To develop a Source Reduction program to meet the needs of the City and comply with the requirements of the California Integrated Waste Management Act of 1989.
- To reduce, in combination with recycling and composting, the amount of solid waste generated within the jurisdiction of the City at its source by 25 percent by the year 1995 and by 50 percent or as much as feasible by the year 2000.

2.4.2 Short-Term Objectives (1-5 years)

The following objectives will be obtained by a combination of source reduction programs. To estimate the reduction of wastes disposed of at landfills through implementation of source reduction measures is difficult. The solid waste generation analysis from Orange County provided a breakdown of disposed waste primarily by material type. When targeting products such as packaging, repairable products, or disposable products for source reduction program development, the analysis is not very useable.

As a result, quantifying source reduction may only be considered an estimation. The agglomerate effect of source reduction measures has been conservatively estimated to be small. For the short term planning period, the agglomerate effect is estimated to be an overall reduction of 2%. The reduction will be the result of fulfilling the following objectives:

- Encourage the reduction of use of non-recyclable products and materials by 12 percent by the year 1995.
- Promote the reduction of the use of disposable products and materials by 8 percent by the year 1995.
- Promote the reduction of the amount of packaging generated by 15 percent by the year 1995.
- Encourage the increase of purchasing of repairable products by 3 percent by the year 1995.
- Increase the efficient use of products by 5 percent by the year 1995.
- Develop an awards program in 1992 to issue awards and other types of public recognition to businesses and non-profit groups that participate in or establish source reduction programs. Present first awards in 1993.
- Develop non-procurement source reduction programs by 1992 to educate residents and the workforce to implement source reduction measures applicable to their situations, such as double-sided copying. Implement first non-procurement campaign by 1993 to target a major waste generator category.
- Evaluate and modify the City's procurement policy to include source reduction objectives by 1993.
- Develop and implement a system of voluntary solid waste reduction plans for businesses and industries by 1993 to help them target source reduction measures for their solid waste streams. As a contingency, consider mandatory participation.
- Develop and implement a system of waste evaluations for businesses and industries to help them target source reduction measures for their solid waste streams. By 1993, perform waste evaluations for 15 percent of the generators, starting with the largest generators.

- Assist in the development of a comprehensive school curriculum by 1994 which teaches the benefits of source reduction as well as recycling and composting.
- Develop public information material for the general public by 1992 to instruct the public on ways to reduce waste and on the benefits of source reduction.
- Establish consumer awareness programs, seminars, and public forums by 1993 that teach source reduction as well as recycling and composting.
- Develop a program of technical assistance to the commercial and industrial sectors and non-profit groups by 1992 to guide their participation in source reduction activities as well as recycling and composting.

2.4.3 Medium-Term Objectives (5-10 years)

For the medium term, the agglomerate effect of the selected source reduction programs is an estimated 4% reduction. The reduction would be a result of continuing to meet the short term objectives as well as the following additional objectives:

- To promote the reduction of non-recyclable products and materials by an additional 15 percent by the year 2000.
- To encourage the reduction in the amount of packaging generated by an additional 20 percent by the year 2000.
- Encourage the increase of purchasing repairable products by an additional 3 percent by the year 2000.
- To support and encourage the reduction in the use of disposable products and materials by an additional 20 percent by the year 2000.
- To evaluate a variable-can-rate for all solid waste collected within the jurisdiction of the City by 1997.

- As a contingency measure, to assist and encourage the residents of La Habra to establish backyard composting programs, including mulching, by 1997 and to reduce the amount of yard wastes generated by 20 percent by the year 2000.

2.5 Recycling Component Goals and Objectives

Each city is required to state the specific objectives to be accomplished during the short-term and medium-term planning periods of the SRRE. Based upon these requirements, the City of La Habra has selected specific objectives for implementation. The objectives are listed in Sections 5.2.2 and 5.2.3.

2.5.1 Component Goals

- To develop a recycling program that will meet the needs of the City and comply with the requirements of the California Integrated Waste Management Act of 1989.
- To reduce, in combination with source reduction and composting, the amount of solid waste generated within the jurisdiction of the City by 25 percent by the year 1995, and by 50 percent or as much as feasible by the year 2000.

2.5.2 Short-Term Objectives (0-5 years)

- Continue curbside collection of recyclable materials from single family residences throughout the short-term planning period. Increase participation by 4% per year from the existing 40% up to 60% in 1995 through public education.
- Increase recycling of the total waste stream by 10% by directing commercial, industrial, multi-family residential, and construction/demolition wastes through a materials recovery facility by 1994.
- Strive to increase existing recycling participation through drop off centers and certified recycling centers by 20% by 1995 through technical support and public education.

- Develop or enhance City agency recycling programs to capture 15% by 1993 and 25% by 1995 of the City-generated waste stream.
- Revise the City procurement policy so as not to exclude recycled products and to provide a price differential to specific products with recycled content to encourage recycling markets.
- In collaboration with the County and/or other cities, increase the amount of recycling by salvaging at the landfill by 20% of wastes hauled by independent haulers by 1995.

2.5.3 Medium-Term Objectives (5-10 years)

- Continue curbside collection of recyclable materials from single family residences throughout the short-term planning period. Strive to increase participation to 80% by 2000 (4% per year) by public education and possibly by adding additional materials for recycling. As a contingency measure, the City will consider instituting mandatory recycling. As needed, expand the program to include cardboard and mixed paper collection so that approximately 12% of the total waste stream is diverted by this program.
- As needed, implement mandatory yard and wood waste separation and collection from single family residences and maintain a 70% participation rate by 2000.
- Continue to recycle the waste stream from the commercial, industrial, multi-family residential, and construction/demolition wastes through a materials recovery facility. As needed, include wood, yard, and mixed plastic waste in the materials recovered by the MRF by 2000 so that about 12% of the total waste stream is diverted by this program.
- Support increased recycling participation through drop off centers and certified recycling centers by 40% by 2000 through technical support and public education.
- Develop or enhance City agency recycling programs to capture 30% of the City-generated waste stream by 2000.

- In collaboration with the County and/or other cities, increase the amount of recycling by salvaging at the landfill by 14% by 2000.

2.6 Composting Component Goals and Objectives

The City has developed specific composting goals and objectives to be accomplished during the short and medium-term planning periods of the SRRE. These are as follows:

2.6.1 Component Goals

- Develop a composting program that will meet the needs of the City and comply with the requirements of the Integrated Waste Management Act of 1989.
- Reduce, in combination with source reduction and recycling, the amount of solid waste generated within the jurisdiction of the City by 25 percent by the year 1995, and by 50 percent or as much as feasible by the year 2000.

2.6.2 Short-Term Objectives (1990-1995)

- By 1994, begin collecting data and developing a baseline for establishing a viable composting program in the medium-term planning period.

2.6.3 Medium-Term Objectives (1995-2000)

- Compost 5% of the waste generated from La Habra through use of a curbside collection program that will target yard and wood wastes. Begin program in 1997 if data warrants establishment of program.
- Compost 3% of the waste generated from La Habra through use of a centralized waste processing facility that will target yard and wood wastes from commercial, industrial, and multifamily residences. Begin program in 1997 if data warrants establishment of program.

- Develop community education programs by 1996 that emphasize the need for and the benefits of composting.
- By 1997, distribute compost for City use in parks, green belts, and other areas.
- 1995 through 2000: Assist and encourage the development of local and regional markets for compost.

2.7 Special Waste Component Goals and Objectives

The City has developed specific goals and objectives to be accomplished during the short and medium-term planning periods of the SRRE. These are as follows:

2.7.1 Component Goals

- Develop and implement a special waste program by 1995 that will both meet the needs of the City and comply with the requirements of the California Integrated Waste Management Act of 1989.
- Continue to reduce, in combination with source reduction, recycling, and composting, the amount of special wastes requiring landfill disposal as much as feasible by the year 2000.

Because special wastes are comprised of non-homogenous waste types, specific objectives have been developed to address those wastes which will be targeted within the Special Waste Component.

2.7.2 Short-Term Specific Objectives (1990-1995)

2.7.2.1 Tires

- Continue to support the County programs to ban tires from the Bee Canyon Landfill and continue to shred tires at the Olinda and Prima Deshecha Landfills.

- Continue to promote utilization of retreaded tires on City fleet vehicles where feasible.
- Encourage other organizations to consider utilizing retreaded tires on fleet vehicles.
- By the end of 1991, review and promote revision of bid specifications for road construction within the City to allow consideration of recycled tires as a constituent of road base.
- Research and coordinate with other Southern California agencies regarding a regional tire shredding and tire recycling or transformation facility in support of Assembly Bill 1843 requirements, including the issuance of RFPs.
- Support state program of minimum standards of tire stockpile management by July 1, 1991.

2.7.2.2 Construction/Demolition (C/D) Debris

- Review and promote revision of City bid specifications to allow for greater use of recycled C/D debris in new or renovated road construction.
- Require all C/D waste haulers to recycle a minimum of 10% of the hauled C/D wastes by December 31, 1991 and increase this minimum by 5% per year until 1995.

2.7.2.3 Infectious Waste

- Identify small quantity infectious waste generators by October 1, 1991.
- Support the County landfill load check program starting April 1, 1991 to ensure that all infectious waste loads, including small quantity amounts, have been properly treated to render the infectious waste a solid waste.

- Throughout the short-term planning period, educate the public on the health hazards of improperly disposing of infectious waste and provide examples of proper infectious waste management methods.
- Starting in June 1992, encourage infectious waste generators to use recyclable (e.g., launderable) materials wherever possible.

2.7.2.4 Asbestos

- Beginning in 1991, and every other year thereafter, coordinate with the California Department of Health Services (DHS) regarding progress of asbestos waste treatment alternatives as they relate to asbestos land ban treatment standards.
- Continue to enforce current acceptable methods of asbestos management and "treatment" which consists of wetting, bagging or otherwise containing, and landfilling according to specific landfill operation practices.
- Support the Orange County load checking and rejection of asbestos from all landfills not permitted to accept asbestos wastes.

2.7.3 Medium-Term Specific Objectives (1995-2000)

2.7.3.1 Tires

- Investigate and implement, where feasible, a procurement policy for recycled tire-in-asphalt road construction.

2.7.3.2 C/D Debris

- Continue to require C/D debris to be recycled.

2.7.3.3 Infectious Waste

- Continue existing programs for informing, training, investigating, and enforcing infectious waste management of large and small quantity generators.

2.7.3.4 Asbestos

- Continue monitoring of DHS progress on asbestos waste treatment alternatives.

2.8 Education and Public Information Component Goals and Objectives

Each city is required to include a description of education and information objectives for the short-term and medium-term planning periods of the SRRE. Based upon this requirement, the following objectives have been selected for the City of La Habra.

2.8.1 Component Goal

The goal of the Education and Public Information Component is to increase public awareness of and participation in source reduction, recycling, composting, and special waste reduction and recovery.

2.8.2 Short-Term Objectives (1990-1995)

- Designate a Recycling Coordinator within one organizational structure who is responsible for developing and implementing public information programs, providing technical assistance to businesses and organizations, and developing educational programs for the school system by August 1992.
- Utilize the Planning Commission to assist policymakers in formulating and implementing the City's source reduction and recycling goals in 1991.
- Develop informational brochures, pamphlets, door hangers and fact sheets for the public starting in 1992.

- Survey public opinion regarding solid waste issues such as source reduction, recycling, and composting to determine education and information needs starting in 1993.
- Encourage and support development of a network of volunteers for activities such as promoting recycling in their neighborhoods by 1993.
- Develop a Recycling Newsletter to inform the citizens of progress made in the various diversion programs (1991).
- Study the possibility of establishing a network of elected officials and community leaders and organizations that will promote public education by 1992.
- Develop, where appropriate, outreach and media presentations such as solid waste exhibits at city-wide events, shopping centers, and other public locations by 1992.
- Involve the community in planning and promoting new source reduction and recycling methods by 1991.
- Assist, where possible, the development of an educational series on waste diversion that would be suitable for presentation to grades Kindergarten through 12 by guest speakers, e.g. recycling coordinator, waste haulers, and recyclers by 1992.
- Involve, where possible, school children and youth groups in recycling drives, contests, and other activities related to source reduction and recycling efforts by 1993.
- Work with the school district to designate a school recycling coordinator to ensure recycling within the school during 1993.
- Encourage the development of student-made video tapes and articles to inform the community by 1993.

- Work with the school district to coordinate public and school tours of recycling centers and processing plants by 1994.
- Work with the school district to develop an Environmental Quality Affairs Committee within the school by 1992.
- Develop a promotional campaign whereby public officials and community leaders may become involved in the community's SRRE program by 1992.
- Develop special events and/or an awards program for leading participants in various categories, such as schools, churches, and small, medium, and large businesses by 1993.
- Develop and promote a small voluntary battery collection program by 1994.
- Develop composting, recycling, and source reduction training sessions where feasible (1993 through 1997).
- Develop a commercial and office recycling program guide for businesses by 1993.
- Develop press packets to facilitate prominent media coverage of programs (1991 through 2000).
- Prepare and disseminate "how to" booklets on source reduction, recycling and composting by 1993.
- Publicize successful government office and private business source reduction and recycling programs starting in 1992.

2.8.3 Medium-Term Objectives (1995-2000)

- Establish a speakers bureau to provide community groups with contact people to speak about recycling, composting, or source reduction by 1995.

- Work with the school districts to establish a "3-R's Day" within the school to promote awareness and participation by 1995.
- Establish a video lending library, if possible, by 1993.
- Compile and publicize case studies of successful government office and private business source reduction and recycling programs by 1995.
- Work with the school district to develop a waste management curriculum for grades Kindergarten through twelve that teaches waste management and recycling concepts within their local community by 1995.
- Develop a higher education waste management curriculum that promotes community awareness of solid waste issues, if appropriate, by 1996.
- Establish a City operated composting demonstration project.
- Establish an Information Center for central dissemination of information and education materials and to house a complete library of resource materials by 1996.
- Develop and promote community action projects by 1996.

SECTION 3 SOLID WASTE/GENERATION

32 Introduction

This section is required to submit a report to the community and to the state to ensure that the waste management and disposal of solid waste is done in a manner that is consistent with the state's policy on waste management and disposal. The report should include a description of the waste management and disposal practices used by the community, a description of the waste management and disposal facilities used by the community, and a description of the waste management and disposal programs used by the community. The report should also include a description of the waste management and disposal programs used by the community to reduce the amount of waste generated, to recycle materials, and to reuse materials.

Section 3 Solid Waste Generation Component

Approved: _____
Date: _____
City of La Habra

Approved: _____
Date: _____
City of La Habra

City of La Habra
Final Draft
Source Reduction and Recycling Element

The community's waste management and disposal practices should be consistent with the state's policy on waste management and disposal. The community should also have a waste management and disposal program that is designed to reduce the amount of waste generated, to recycle materials, and to reuse materials. The community should also have a waste management and disposal program that is designed to ensure that the waste management and disposal facilities used by the community are consistent with the state's policy on waste management and disposal.

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

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THE UNIVERSITY OF CHICAGO
DIVISION OF PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

REPORT OF THE

COMMISSION ON THE

SOLID WASTE

GENERATION

COMPONENT

OF THE

COMMISSION ON THE

ENVIRONMENTAL

CONSEQUENCES OF

NUCLEAR POWER

PLANT SITES

FINAL REPORT

NUCLEAR REGULATORY COMMISSION

REPORT

NUCLEAR
REGULATORY COMMISSION

NUCLEAR REGULATORY COMMISSION

NUCLEAR REGULATORY COMMISSION

SECTION 3 SOLID WASTE GENERATION ANALYSIS

3.1 Introduction

Each city is required to conduct a (Solid Waste Generation Study) to provide an assessment of its local waste stream so the city will have the basic information it needs to make decisions regarding the future of its waste management, and decisions regarding the preparation of the SRRE.

In response to diminishing landfill space, environmental concerns, and economic conditions, the cities in the State of California have been required to consider alternative waste management technologies, including source reduction, recycling, and composting programs. To develop these technologies, the cities must obtain information about their local waste stream. The makeup of these waste streams can be easily influenced by a number of environmental factors, including:

- Seasonal Variations and Climatic Differences
- State of the Economy, and
- Current Recycled Materials Market Conditions

Seasonal variations and climatic differences affect the characteristics and quantities of the solid waste generated. For example, during the winter months rain saturated refuse may increase the weight of solid waste generated.

The *state of the economy* can affect the characteristics and the quantities of the solid waste generated. A stronger economy leads to more consumer spending, commercial production, construction, and generation of solid waste. Also more building results in increased construction and demolition wastes that could alter the makeup of the municipal waste stream.

The *current recycled material market conditions* affect the characteristics and the quantities of solid waste as the demand for recyclable materials varies. For example, aluminum currently has a high buy back value and is found in very small quantities in the municipal waste stream. If the demand for aluminum decreases, the quantities of aluminum found in the municipal waste stream would increase. This would change the makeup of solid waste and the quantities of solid waste generated.

3.2 Solid Waste Characterization Studies

A Solid Waste Characterization Study was conducted for Orange County by the Orange County Solid Waste Management Department (Technical Appendix Volume II). This study was designed to evaluate three basic aspects of the local municipal waste stream:

- Quantity of Waste
- Composition of Waste, and
- Sources of Waste Generation

Quantity of waste refers to the amount of waste generated within the community, both in terms of weight and volume. *Composition of waste* refers to the relative quantities of different waste stream components, expressed in percent of the total waste stream. *Sources of waste generation* links portions of the waste stream to specific generators within the community, i.e. residential, commercial, and industrial generators. A Solid Waste Generation Study was conducted by the County as a component of the Solid Waste Characterization Study. The Solid Waste Generation Study broke down the waste disposal stream from La Habra into residential, commercial, industrial, demolition, and allocated waste generators as shown in Table 3-1. Demolition and allocated generation refers to waste disposal allocations from the county or region on the basis of the percent of the county population found in La Habra.

TABLE 3-1
Results of Orange County
Waste Generation Study

Waste Generator	Waste (tpy)	Percent of Waste
Residential	32,166	32%
Commercial	12,572	12%
Industrial	33,634	33%
Demolition	0	0%
Allocated	<u>23,212</u>	<u>23%</u>
Total	101,585	100%

A Solid Waste Diversion Study survey was conducted for all of Orange County by the Orange County Integrated Waste Management Department (Technical Appendix Volume II). During preparation of the SRRE, a supplemental recycling survey was conducted by Kleinfelder to substantiate the County's solid waste diversion quantities. These studies were designed to evaluate the amount of solid waste currently diverted from Orange County landfills through existing source reduction and recycling programs.

In 1989, the City of La Habra also conducted a waste diversion study to determine what businesses recycle, which materials are recycled, and the quantities of each.

3.3 Current Solid Waste Disposal and Diversion Quantities

A summary of La Habra's waste generation, characterization, and diversion are presented in Section 1 of the SRRE. The following discussion of disposal and diversion examines the results of the studies and the discrepancies in quantities that arise from using different data sources. The results of the Solid Waste Characterization Study, the Solid Waste Diversion Study, data provided by the waste hauler (Western Waste), the recycling survey conducted by the City, and records provided by certified recycling centers has been compared. The results of the comparison has been identification of the best available data. This data has been adopted and used as the basis for the plans and programs developed in the SRRE.

3.3.1 Waste Disposal Rate

Because waste generated in La Habra is disposed of in landfills, waste disposal quantities were evaluated to provide background data on historical waste generation. Estimates vary on waste volumes disposed from La Habra. The Orange County Solid Waste Characterization Study identified 76,435 tons disposed of annually by La Habra generators. Of this total, 28,279 was residential, 17,986 commercial, 7,709 industrial, and 22,461 demolition/allocated. The demolition/allocated included only allocated tonnage. Total unallocated tonnage was 53,974 according to the Solid Waste Characterization Study.

Based on records maintained by the waste hauler, 56,171 tons were disposed of in 1990 from La Habra. Western Waste compiled tables of tonnages collected from only La Habra and disposed of at Orange County (Olinda), BKK, and through others. Table 3-2 shows Western Waste's disposal quantities for 1987 through 1990. Nearly all of the waste is disposed of at the Orange County (Olinda) Landfill. A small percentage of waste is exported to BKK Landfill as a result of conflicting route schedules and landfill business hours. Wastes exported to BKK are first transferred into trailer trucks at a small transfer station in Gardena owned by Western Waste.

For total disposal tonnage, the City has elected to use Western Waste's disposal records plus the County allocated quantity for a total disposal rate of 78,632 tons per year for 1990. Note that the allocated quantities may be modified upon direction from the County Local Task Force or the State when reviewing the preliminary draft.

TABLE 3-2
WASTE DISPOSAL RATES PER GENERATOR
1990
LA HABRA

Year	Housing SFR	MFR	Commercial	Rolloffs	Grand Total
Average	21,776	9,357	13,825	12,264	57,222
1987	23,502	9,929	14,064	12,235	59,730
1988	21,325	9,053	13,579	11,759	55,716
1989	21,872	9,413	14,119	11,866	57,270
1990	20,404	9,033	13,538	13,196	56,171
<i>Source : Western Waste</i>					

SFR refers to single family residences.

MFR refers to multifamily residences.

Commercial includes commercial and industrial generators.

3.3.2 Waste Diversion Rate

[18732 (a)]

To develop a generation rate for 1990, the disposal rate for 1990 must be combined with the waste diversion rate. The waste diversion rate is a combination of source reduction, recycling, and composting measures. Each of these measures is discussed in detail in the respective section of the SRRE. For the purpose of developing a waste generation rate, only the results of diversion studies will be addressed in this section.

The Orange County Solid Waste Diversion Study identified a total diversion rate of 79,466 tons per year. This included allocations of 69,751 tpy recycled: 523 tpy residential and 69,228 commercial/industrial/construction/demolition. Of the last category, 69,000 tons were inert solids from processing road materials. The Study also included unallocated tonnages of 402 tons composted, 351 tons incinerated, and 8,962 recycling.

The tonnages contrast dramatically with results of the recycling survey performed by the La Habra Public Services Department (Table 5-3) and the records provided by certified recyclers and Western Waste (Table 5-4). Based on these sources, the actual recycling rate was determined to be 20,926 tons for 1990. The City of La Habra considers this quantity to be a more accurate reflection of recycling activities occurring in the city. A breakdown of the diversion by waste type and recycler is shown in Table 3-3.

No records have been available for composting and incineration. On this basis, La Habra has excluded these categories and the County allocated composting and incineration quantities from the estimated total diversion until a period when record keeping and data collection can establish a reliable baseline.

Using only recycling (20,926 tons) and County allocated diversion (69,228 tons), La Habra diverted 90,677 tons of waste in 1990. However, the City considers it unlikely that inert solids should continue to be counted towards diversion in light of the goal to reduce the amount of waste taken to the landfill. For the purpose of developing a plan to reduce waste disposal to land, La Habra intends to disregard the 69,000 tons of allocated inert solids recycling and use a total diversion rate of 20,926 tons for planning purposes.

3.3.3 Modifications to Solid Waste Generation Quantities

The County study provided diversion quantities for all materials found in the municipal waste stream, including an allocated portion of inert wastes that accounted for approximately 78 percent of the materials being diverted (69,000 tons) within the City. Allocated materials were distributed to cities within the County based upon population only and not upon percent of development, building activity, etc.

Because of these high numbers, the City generation study resulted in a current diversion rate of about 52 percent. The City felt these numbers to be high and unrealistic, and removed the allocated portion of the inert materials from its current waste diversion

quantities. This reduced the current diversion rate to approximately 22 percent.

The City has used the following criteria to justify altering its current waste generation quantities:

- Legislative changes regarding inert wastes
- Double-counting and inaccurate distribution of allocated inert wastes within the County study
- Allocated materials recycled out of the jurisdictional control of the City
- Yearly changes in inert waste generation

Legislative Changes: It is possible that the Integrated Waste Management Board may eliminate inert wastes as a possible diversion material. If this happens, and the City has developed a program dependent on these materials, it is possible the City would fail to achieve the State diversion requirements.

Double-Counting: Because the materials were researched collectively, it is possible that double-counting may have occurred. For example, materials recovered at a transfer station and taken to a concrete processing facility, may have been counted once at the transfer station and once at the processing facility.

Inaccurate Distribution: Because the materials were allocated on a population basis, it is possible that the City received a higher diversion quantity than deserved. If so, the City would be establishing a program to continue the diversion of materials that never existed.

Lack of Jurisdictional Control: Most of the inert recycled materials were diverted and processed without involvement of the City. Because of this, developing a program to continue diversion of these materials would be difficult for the City to implement and monitor.

Changes in Waste Generation: Most inert wastes are recovered from construction and demolition projects, which are dependent on the condition of the economy. If the growth-rate of the economy declines, and the City has developed a program dependent on the diversion of inert materials, it is possible the City would fail to achieve the State diversion requirements.

Table 3-3
Waste Diversion Through Recycling
La Habra
1990

Recyclable Materials ¹	Quantities (tpy)
Aluminum Cans	294
Cardboard	10,533
Food Wastes	1,560
Glass, CRV	1,004
Glass, Other Containers	NR
Inert Solids	0
Metals, Ferrous/Tin Cans	30
Metals, Non-Ferrous	NR
Metals, Other	NR
Paper, Computer	22
Paper, High Grade Ledger	NR
Paper, Newspaper	1,297
Plastic, Film	121
Plastic, HDPE	14
Plastic, PET	67
Tires and Rubber	1,126
Waste Oil	22
Wood Waste	4,632
Yard Waste	NR
Total	<u>20,926</u>

1. Amounts shown to nearest whole number. Amounts totaled from last columns of Table 5-2 and Table 5-3.

NR = Not Recorded

**TABLE 3-4 GENERATION, DISPOSAL, AND DIVERSION - 1990
CITY OF LA HABRA**

Activity	Category	Generator	Tonnage	Actual Subtotal	Allocated Subtotal	Act + All Totals	Total for Planning Purposes
Disposal	Actual	SFR Residential MFR Residential Commercial Industrial Const./Demolition	20,404 9,033 9,477 4,061 13,196	56,171	22,461	78,632	78,632
	Allocated	Allocated	22,461				
Diversion	Actual	SFR Residential Other Residential Commercial Industrial	991 1,738 14,495 4,978	22,202	69,751	90,677	22,953
	Allocated	Allocated Residential Allocated C/I/D	523 69,228				
Generation	Actual	Residential Commercial Industrial	32,166 23,972 22,235	78,373	92,212	170,585	101,585
	Allocated	Allocated, All	92,212				

1. All disposal tonnages provided by the City Manager, La Habra.
2. SFR Residential diversion tonnages provided by Western Waste.
3. Other residential diversion provided by Certified Recyclers.
4. Western Waste's records commercial/industrial waste together: 13,538 tons. Breakdown between commercial and industrial tonnages for disposal from Orange County Waste Characterization Study, Table A Tonnages, February 22, 1991, where commercial tonnage equals 70 percent of disposal and industrial equals 30 percent of commercial/industrial tonnage.
5. Allocated Diversion tonnages from Orange County Waste Characterization Study Table B Tonnages and Table 1 County-Wide Allocations, February 22, 1991. 69,000 tons of allocated industrial recycling is inert solids.
6. Commercial/industrial diversion tonnages from Public Services Division survey, 1989.
7. Total for planning purposes does not include diverted inert solids.

3.3.5 Waste Characterization

[18732 (a)]

In the Solid Waste Characterization Study the disposed waste stream was sampled and categorized according to the categories established by the CIWMB. Tables 3-6, 3-9, and 3-12 show the break down of the waste stream by material per generator.

3.4 Projected Waste Generation, Diversion, and Disposal

[18732 (b)]

Table 3-5 illustrates the method used to project changes to the waste generation rate. Waste actually generated in La Habra is assumed to grow or reduce at a rate that is directly proportional to population and commercial growth rates.

TABLE 3-5 Projected Waste Generation La Habra				
Year	Residential	Commercial	Industrial Allocated	Total
1990	32,166	23,972	45,447	101,585
1995	32,447	24,284	46,038	102,769
2000	32,731	24,599	46,636	103,966

Tables 3-6 through 3-14 show projections of future disposal for 1990 through 2005 for each of the generators: residential (single family and multifamily residential), commercial, and industrial. Projections for waste diversion and generation are discussed in the Integration Component, Section 11. Modified projections for waste disposal are also covered in Section 11. The modifications are based on changes produced by source reduction, recycling, and composting program implementation.

Potential diversion is based on the Orange County Solid Waste Characterization Study, on projected disposal rates for 1995 and 2000, and from local diversion data. The selected materials for diversion are listed below. These materials were identified on the basis of their having the largest potential for reducing waste disposal:

- Cardboard
- Newspaper

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- Cardboard

- Newspaper
- High Grade Paper
- Mixed Paper
- Aluminum Cans
- Tin Cans
- Ferrous Metals
- CRV Glass
- Other Recyclable Glass
- HDPE
- PET
- Mixed Plastics
- Yard Wastes, Shrubby and Leafy
- Wood Wastes

3.5 Waste That Cannot be Diverted

[19732 (c)]

The following list of materials that cannot be diverted is based on the Solid Waste Characterization Study conducted by Orange County, on the limitations of selected diversion programs, on information obtained from materials recovery facilities and from reports on the observed condition of various materials during waste sorts. The limitations to diversion are a result of limited participation, contamination, biological and physical degradation, health restrictions, and a lack of recovery technology.

A limitation of the curbside program is the participation rate of the residents. With 60% participation targeted for 1995 and 80% participation targeted for 2000, a number of residents still will not be participating. The nonparticipants will continue to dispose of a portion of recyclables which will be virtually nonrecoverable except at a low rate by salvaging.

Because of contamination and biological degradation of wastes prior to collection, a portion of the recyclable materials simply cannot be recycled without source separation. Therefore a portion of the materials identified for recovery at a Material Recovery Facility (MRF) would not be recoverable. Other reductions that affect recovery primarily at a MRF are physical degradation such as glass breaking to nonrecoverable sizes. These reductions in estimated quantities of recoverable materials have been included in the projected recovery rates presented in Table 5-23 of Section 5.

A third portion of the waste stream cannot be diverted using the selected programs because they are putrescible, i.e. they rot, and have limited reuse potential except as compost because of existing public health regulations. Still another portion of the materials cannot be recycled because there is no known technology to recover and process the materials.

With the exception of the last two limitations, the limitations listed above will prevent 10% to 50% of the targeted materials from being diverted. Refer to Section 3.4 for the list of targeted materials.

Other material types cannot be diverted because of health limitations or lack of feasible technology for separation, collection, processing, remanufacturing or source reduction. These materials include either whole categories of the following materials or very large percentages of the categories:

- Other Paper
- Other Non-Recyclable Glass
- Food Waste
- Textiles
- Leather
- Household Hazardous Waste

TABLE 3-6

PROJECTED RESIDENTIAL WASTE GENERATIONS--Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	1,740	1,743	1,746	1,749	1,752	1,755	1,758	1,761	1,764	1,767	1,771	1,774	1,777	1,780	1,783	1,786
Mixed Paper	3,328	3,334	3,340	3,345	3,351	3,357	3,363	3,369	3,375	3,381	3,386	3,392	3,398	3,404	3,410	3,416
Newspaper	4,378	4,386	4,393	4,401	4,409	4,416	4,424	4,432	4,439	4,447	4,455	4,463	4,470	4,478	4,486	4,494
High Grade Ledger Paper	224	224	225	225	226	226	226	227	227	228	228	228	229	229	230	230
Other Paper	1,778	1,781	1,784	1,787	1,790	1,794	1,797	1,800	1,803	1,806	1,809	1,812	1,816	1,819	1,822	1,825
HDPE Plastics	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570
LDPE Plastics	327	328	328	329	329	330	330	331	332	332	333	333	334	334	335	336
PETE Plastics	139	139	139	140	140	140	140	141	141	141	141	142	142	142	142	143
PP Plastics	59	59	59	59	59	60	60	60	60	60	60	60	60	60	60	61
PS Plastics	212	212	213	213	213	214	214	215	215	215	216	216	216	217	217	218
PVC Plastics	31	31	31	31	31	31	31	31	31	31	32	32	32	32	32	32
Other Plastics	332	333	333	334	334	335	335	336	337	337	338	338	339	340	340	341
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	1,442	1,445	1,447	1,450	1,452	1,455	1,457	1,460	1,462	1,465	1,467	1,470	1,472	1,475	1,478	1,480
Other Recyclable Glass	604	605	606	607	608	609	610	611	612	614	615	616	617	618	619	620
Other Non-Recyclable Glass	45	45	45	45	45	45	45	46	46	46	46	46	46	46	46	46
Aluminum Cans	349	350	350	351	351	352	353	353	354	355	355	356	356	357	358	358
Bi-Metal Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Cans	470	471	472	472	473	474	475	476	477	477	478	479	480	481	482	482
Ferrous Metals	369	370	370	371	372	372	373	374	374	375	375	376	377	377	378	379
Non-Ferrous Metals	95	95	95	95	96	96	96	96	96	97	97	97	97	97	97	98
White Goods	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Yard Waste	6,923	6,935	6,947	6,959	6,971	6,984	6,996	7,008	7,020	7,032	7,045	7,057	7,069	7,081	7,094	7,106
Food Waste	2,294	2,298	2,302	2,306	2,310	2,314	2,318	2,322	2,326	2,330	2,334	2,338	2,342	2,347	2,351	2,355
Tires & Rubber	392	393	393	394	395	395	396	397	397	398	399	400	400	401	402	402
Wood Wastes	418	419	419	420	421	422	422	423	424	425	425	426	427	428	428	429
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	726	727	729	730	731	732	734	735	736	737	739	740	741	743	744	745
Textiles	184	184	185	185	185	186	186	186	187	187	187	188	188	188	189	189
Leather	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Inert Wastes	2,422	2,426	2,430	2,435	2,439	2,443	2,447	2,452	2,456	2,460	2,465	2,469	2,473	2,477	2,482	2,486
Hazardous Waste	419	420	420	421	422	423	423	424	425	426	426	427	428	429	429	430
Disposable Diapers	912	914	915	917	918	920	922	923	925	926	928	930	931	933	935	936
Remainder	977	979	980	982	984	986	987	989	991	992	994	996	998	999	1,001	1,003
Total	32,166	32,222	32,278	32,335	32,391	32,447	32,504	32,561	32,617	32,674	32,731	32,788	32,845	32,902	32,960	33,017

TABLE 3-7

PROJECTED RESIDENTIAL WASTE DISPOSALS—Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	1,740	1,743	1,746	1,749	1,752	1,755	1,758	1,761	1,764	1,767	1,771	1,774	1,777	1,780	1,783	1,786
Mixed Paper	3,328	3,334	3,340	3,345	3,351	3,357	3,363	3,369	3,375	3,381	3,386	3,392	3,398	3,404	3,410	3,416
Newspaper	3,081	3,086	3,092	3,097	3,103	3,108	3,113	3,119	3,124	3,130	3,135	3,141	3,146	3,152	3,157	3,162
High Grade Ledger Paper	202	202	203	203	203	204	204	204	205	205	206	206	206	207	207	207
Other Paper	1,778	1,781	1,784	1,787	1,790	1,794	1,797	1,800	1,803	1,806	1,809	1,812	1,816	1,819	1,822	1,825
HDPE Plastics	541	542	543	544	545	546	547	548	549	550	550	551	552	553	554	555
LDPE Plastics	327	328	328	329	329	330	330	331	332	332	333	333	334	334	335	336
PETE Plastics	72	72	72	72	73	73	73	73	73	73	73	73	74	74	74	74
PP Plastics	59	59	59	59	59	60	60	60	60	60	60	60	60	60	60	61
PS Plastics	212	212	213	213	213	214	214	215	215	215	216	216	216	217	217	218
PVC Plastics	31	31	31	31	31	31	31	31	31	31	32	32	32	32	32	32
Other Plastics	332	333	333	334	334	335	335	336	337	337	338	338	339	340	340	341
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	438	439	440	440	441	442	443	443	444	445	446	446	447	448	449	450
Other Recyclable Glass	604	605	606	607	608	609	610	611	612	614	615	616	617	618	619	620
Other Non-Recyclable Glass	45	45	45	45	45	45	45	46	46	46	46	46	46	46	46	46
Aluminum Cans	55	55	55	55	55	55	56	56	56	56	56	56	56	56	56	56
Bi-Metal Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Cans	439	440	441	441	442	443	444	444	445	446	447	447	448	449	450	451
Ferrous Metals	369	370	370	371	372	372	373	374	374	375	375	376	377	377	378	379
Non-Ferrous Metals	95	95	95	95	96	96	96	96	96	97	97	97	97	97	97	98
White Goods	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Yard Waste	6,923	6,935	6,947	6,959	6,971	6,984	6,996	7,008	7,020	7,032	7,045	7,057	7,069	7,081	7,094	7,106
Food Waste	2,294	2,298	2,302	2,306	2,310	2,314	2,318	2,322	2,326	2,330	2,334	2,338	2,342	2,347	2,351	2,355
Tires & Rubber	392	393	393	394	395	395	396	397	397	398	399	400	400	401	402	402
Wood Wastes	418	419	419	420	421	422	422	423	424	425	425	426	427	428	428	429
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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Textiles	184	184	185	185	185	186	186	186	187	187	187	188	188	188	189	189
Leather	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Inert Wastes	2,422	2,426	2,430	2,435	2,439	2,443	2,447	2,452	2,456	2,460	2,465	2,469	2,473	2,477	2,482	2,486
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Disposable Diapers	912	914	915	917	918	920	922	923	925	926	928	930	931	933	935	936
Remainder	977	979	980	982	984	986	987	989	991	992	994	996	998	999	1,001	1,003
Total	29,437	29,488	29,540	29,591	29,643	29,694	29,746	29,798	29,850	29,902	29,954	30,006	30,059	30,111	30,163	30,216

TABLE 3-8

PROJECTED RESIDENTIAL WASTE DIVERSIONS-Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mixed Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Newspaper	1,297	1,299	1,302	1,304	1,306	1,308	1,311	1,313	1,315	1,317	1,320	1,322	1,324	1,327	1,329	1,331
High Grade Ledger Paper	22	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23
Other Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HDPE Plastics	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
LDPE Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PETE Plastics	67	67	67	67	67	68	68	68	68	68	68	68	68	69	69	69
PP Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PS Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PVC Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	1,004	1,006	1,008	1,009	1,011	1,013	1,015	1,016	1,018	1,020	1,022	1,023	1,025	1,027	1,029	1,031
Other Recyclable Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Non-Recyclable Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aluminum Cans	294	295	295	296	296	297	297	298	298	299	299	300	300	301	301	302
Bi-Metal Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Cans	31	31	31	31	31	31	31	31	31	31	32	32	32	32	32	32
Ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
White Goods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yard Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tires & Rubber	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood Wastes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inert Wastes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazardous Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Disposable Diapers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Remainder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2,729	2,734	2,739	2,743	2,748	2,753	2,758	2,762	2,767	2,772	2,777	2,782	2,787	2,791	2,796	2,801

TABLE 3-9

PROJECTED COMMERCIAL WASTE GENERATIONS-Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	11,824	11,855	11,885	11,918	11,947	11,978	12,009	12,040	12,071	12,102	12,133	12,165	12,197	12,228	12,260	12,291
Mixed Paper	520	521	523	524	525	527	528	529	531	532	534	535	536	538	539	541
Newspaper	106	106	107	107	107	107	108	108	108	108	109	109	109	110	110	110
High Grade, Ledger Paper	97	97	98	98	98	98	99	99	99	99	100	100	100	100	101	101
Other Paper	570	571	573	574	576	577	579	580	582	583	585	588	588	589	591	593
HDPE Plastics	279	280	280	281	282	283	283	284	285	286	286	287	288	289	289	290
LDPE Plastics	86	86	86	87	87	87	87	88	88	88	88	88	89	89	89	89
PETE Plastics	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PP Plastics	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
PS Plastics	45	45	45	45	45	46	46	46	46	46	46	46	46	47	47	47
PVC Plastics	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30	30
Other Plastics	334	335	336	337	337	338	339	340	341	342	343	344	345	345	346	347
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	75	75	75	76	76	76	76	76	77	77	77	77	77	78	78	78
Other Recyclable Glass	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Other Non-Recyclable Glass	120	120	121	121	121	122	122	122	123	123	123	123	124	124	124	125
Aluminum Cans	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Bi-Metal Containers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tin Cans	26	26	26	26	26	26	26	26	27	27	27	27	27	27	27	27
Ferrous Metals	735	737	739	741	743	745	746	748	750	752	754	756	758	760	762	764
Non-Ferrous Metals	130	130	131	131	131	132	132	132	133	133	133	134	134	134	135	135
White Goods	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24
Yard Waste	472	473	474	476	477	478	479	481	482	483	484	486	487	488	489	491
Food Waste	2,847	2,854	2,862	2,869	2,877	2,884	2,892	2,899	2,907	2,914	2,922	2,929	2,937	2,944	2,952	2,959
Tires & Rubber	1,193	1,196	1,199	1,202	1,205	1,209	1,212	1,215	1,218	1,221	1,224	1,227	1,231	1,234	1,237	1,240
Wood Wastes	2,807	2,814	2,822	2,829	2,836	2,843	2,851	2,858	2,866	2,873	2,880	2,888	2,895	2,903	2,910	2,918
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Textiles	172	172	173	173	174	174	175	175	176	176	177	177	177	178	178	179
Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inert Wastes	340	341	342	343	344	344	345	346	347	348	349	350	351	352	353	353
Hazardous Waste	234	235	235	236	236	237	238	238	239	240	240	241	241	242	243	243
Disposable Diapers	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24
Remainder	845	847	849	852	854	856	858	860	863	865	867	869	872	874	876	878
Total	23,972	24,034	24,097	24,159	24,221	24,284	24,347	24,410	24,473	24,536	24,599	24,663	24,727	24,791	24,855	24,919

TABLE 3-10
PROJECTED COMMERCIAL WASTE DISPOSALS-Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	1,291	1,294	1,298	1,301	1,304	1,308	1,311	1,315	1,318	1,321	1,325	1,328	1,332	1,335	1,339	1,342
Mixed Paper	520	521	523	524	525	527	528	529	531	532	534	535	536	538	539	541
Newspaper	106	106	107	107	107	107	108	108	108	108	109	109	109	110	110	110
High Grade Ledger Paper	97	97	98	98	98	98	99	99	99	99	100	100	100	100	101	101
Other Paper	570	571	573	574	576	577	579	580	582	583	585	586	588	589	591	593
HDPE Plastics	279	280	280	281	282	283	283	284	285	286	286	287	288	289	289	290
LDPE Plastics	86	86	86	87	87	87	87	88	88	88	88	88	89	89	89	89
PETE Plastics	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PP Plastics	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
PS Plastics	45	45	45	45	45	46	46	46	46	46	46	46	46	47	47	47
PVC Plastics	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30	30
Other Plastics	334	335	336	337	337	338	339	340	341	342	343	344	345	345	346	347
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	75	75	75	76	76	76	76	76	77	77	77	77	77	78	78	78
Other Recyclable Glass	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Other Non-Recyclable Glass	120	120	121	121	121	122	122	122	123	123	123	123	124	124	124	125
Aluminum Cans	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Bi-Metal Containers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tin Cans	26	26	26	26	26	26	26	26	27	27	27	27	27	27	27	27
Ferrous Metals	735	737	739	741	743	745	746	748	750	752	754	756	758	760	762	764
Non-Ferrous Metals	130	130	131	131	131	132	132	132	133	133	133	134	134	134	135	135
White Goods	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24
Yard Waste	472	473	474	476	477	478	479	481	482	483	484	486	487	488	489	491
Food Waste	1,287	1,290	1,294	1,297	1,300	1,304	1,307	1,311	1,314	1,317	1,321	1,324	1,328	1,331	1,334	1,338
Tires & Rubber	67	67	67	68	68	68	68	68	68	69	69	69	69	69	69	70
Wood Wastes	1,531	1,535	1,539	1,543	1,547	1,551	1,555	1,559	1,563	1,567	1,571	1,575	1,579	1,583	1,587	1,591
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Textiles	172	172	173	173	174	174	175	175	176	176	177	177	177	178	178	179
Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inert Wastes	340	341	342	343	344	344	345	346	347	348	349	350	351	352	353	353
Hazardous Waste	234	235	235	236	236	237	238	238	239	240	240	241	241	242	243	243
Disposable Diapers	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24
Remainder	845	847	849	852	854	856	858	860	863	865	867	869	872	874	876	878
Total	9,477	9,502	9,526	9,551	9,576	9,600	9,625	9,650	9,675	9,700	9,725	9,750	9,776	9,801	9,826	9,851

TABLE 3-11
PROJECTED COMMERCIAL WASTE DIVERSIONS—Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	10,533	10,560	10,588	10,615	10,643	10,670	10,698	10,725	10,753	10,781	10,809	10,837	10,865	10,893	10,921	10,949
Mixed Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Newspaper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
High Grade Ledger Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HDPE Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LDPE Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PETE Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PP Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PS Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PVC Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Recyclable Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Non-Recyclable Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aluminum Cans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bi-Metal Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Cans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
White Goods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yard Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food Waste	1,560	1,564	1,568	1,572	1,576	1,580	1,584	1,588	1,593	1,597	1,601	1,605	1,609	1,613	1,617	1,622
Tires & Rubber	1,126	1,129	1,132	1,135	1,138	1,141	1,144	1,147	1,150	1,153	1,155	1,158	1,161	1,164	1,167	1,170
Wood Wastes	1,276	1,279	1,283	1,286	1,289	1,293	1,296	1,299	1,303	1,306	1,309	1,313	1,316	1,320	1,323	1,326
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inert Wastes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazardous Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Disposable Diapers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Remainder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	14,495	14,533	14,570	14,608	14,646	14,683	14,722	14,760	14,798	14,836	14,874	14,913	14,952	14,990	15,029	15,068

TABLE 3-12

PROJECTED INDUSTRIAL WASTE GENERATIONS—Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	1,339	1,342	1,346	1,349	1,353	1,358	1,360	1,363	1,367	1,371	1,374	1,378	1,381	1,385	1,388	1,392
Mixed Paper	769	771	773	775	777	779	781	783	785	787	789	791	793	795	797	799
Newspaper	246	247	247	248	249	249	250	250	251	252	252	253	254	254	255	256
High Grade Ledger Paper	129	129	130	130	130	131	131	131	132	132	132	133	133	133	134	134
Other Paper	792	794	798	798	800	802	804	806	809	811	813	815	817	819	821	823
HDPE Plastics	308	309	310	310	311	312	313	314	314	315	316	317	318	319	319	320
LDPE Plastics	460	461	462	464	465	466	467	468	470	471	472	473	474	476	477	478
PETE Plastics	27	27	27	27	27	27	27	27	28	28	28	28	28	28	28	28
PP Plastics	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
PS Plastics	97	97	98	98	98	98	99	99	99	99	100	100	100	100	101	101
PVC Plastics	25	25	25	25	25	25	25	25	26	26	26	26	26	26	26	26
Other Plastics	2,062	2,067	2,073	2,078	2,083	2,089	2,094	2,100	2,105	2,111	2,116	2,121	2,127	2,132	2,138	2,143
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	91	91	91	92	92	92	92	93	93	93	93	94	94	94	94	95
Other Recyclable Glass	37	37	37	37	37	37	38	38	38	38	38	38	38	38	38	38
Other Non-Recyclable Glass	87	87	87	88	88	88	88	89	89	89	89	90	90	90	90	90
Aluminum Cans	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
BI-Metal Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Cans	75	75	75	76	76	76	76	76	77	77	77	77	77	78	78	78
Ferrous Metals	1,056	1,059	1,061	1,064	1,067	1,070	1,073	1,075	1,078	1,081	1,084	1,086	1,089	1,092	1,095	1,098
Non-Ferrous Metals	45	45	45	45	45	46	46	46	46	46	46	46	46	47	47	47
White Goods	99	99	100	100	100	100	101	101	101	101	102	102	102	102	103	103
Yard Waste	1,673	1,677	1,682	1,686	1,690	1,695	1,699	1,704	1,708	1,712	1,717	1,721	1,726	1,730	1,735	1,739
Food Waste	437	438	439	440	442	443	444	445	446	447	448	450	451	452	453	454
Tires & Rubber	94	94	94	95	95	95	95	96	96	96	96	97	97	97	97	98
Wood Wastes	8,646	8,668	8,691	8,713	8,736	8,758	8,781	8,804	8,827	8,849	8,872	8,895	8,918	8,941	8,965	8,988
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles	157	157	158	158	159	159	159	160	160	161	161	162	162	162	163	163
Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inert Wastes	23,846	23,908	23,970	24,032	24,094	24,156	24,219	24,282	24,344	24,407	24,470	24,534	24,597	24,661	24,725	24,788
Hazardous Waste	912	914	917	919	921	924	926	929	931	933	936	938	941	943	946	948
Disposable Diapers	35	35	35	35	35	35	36	36	36	36	36	36	36	36	36	36
Remainder	1,885	1,890	1,895	1,900	1,905	1,910	1,914	1,919	1,924	1,929	1,934	1,939	1,944	1,949	1,954	1,959
Total	45,447	45,565	45,683	45,801	45,920	46,038	46,158	46,277	46,397	46,517	46,636	46,758	46,879	47,000	47,121	47,243

TABLE 3-13
PROJECTED INDUSTRIAL WASTE DISPOSALS-Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	1,339	1,342	1,346	1,349	1,353	1,356	1,360	1,363	1,367	1,371	1,374	1,378	1,381	1,385	1,388	1,392
Mixed Paper	769	771	773	775	777	779	781	783	785	787	789	791	793	795	797	799
Newspaper	246	247	247	248	249	249	250	250	251	252	252	253	254	254	255	256
High Grade Ledger Paper	129	129	130	130	130	131	131	131	132	132	132	133	133	133	134	134
Other Paper	792	794	796	798	800	802	804	808	809	811	813	815	817	819	821	823
HDPE Plastics	308	309	310	310	311	312	313	314	314	315	316	317	318	319	319	320
LDPE Plastics	339	340	341	342	343	343	344	345	346	347	348	349	350	351	351	352
PETE Plastics	27	27	27	27	27	27	27	27	28	28	28	28	28	28	28	28
PP Plastics	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
PS Plastics	97	97	98	98	98	98	99	99	99	99	100	100	100	100	101	101
PVC Plastics	25	25	25	25	25	25	25	25	26	26	26	26	26	26	26	26
Other Plastics	2,062	2,067	2,073	2,078	2,083	2,089	2,094	2,100	2,105	2,111	2,116	2,121	2,127	2,132	2,138	2,143
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	91	91	91	92	92	92	92	93	93	93	93	94	94	94	94	95
Other Recyclable Glass	37	37	37	37	37	37	38	38	38	38	38	38	38	38	38	38
Other Non-Recyclable Glass	87	87	87	88	88	88	88	89	89	89	89	90	90	90	90	90
Aluminum Cans	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
BI-Metal Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Cans	75	75	75	76	76	76	76	76	77	77	77	77	77	78	78	78
Ferrous Metals	1,056	1,059	1,061	1,064	1,067	1,070	1,073	1,075	1,078	1,081	1,084	1,086	1,089	1,092	1,095	1,098
Non-Ferrous Metals	45	45	45	45	45	46	46	46	46	46	46	46	46	47	47	47
White Goods	99	99	100	100	100	100	101	101	101	101	102	102	102	102	103	103
Yard Waste	1,673	1,677	1,682	1,686	1,690	1,695	1,699	1,704	1,708	1,712	1,717	1,721	1,726	1,730	1,735	1,739
Food Waste	437	438	439	440	442	443	444	445	446	447	448	450	451	452	453	454
Tires & Rubber	94	94	94	95	95	95	95	96	96	96	96	97	97	97	97	98
Wood Wastes	4,014	4,024	4,035	4,045	4,056	4,066	4,077	4,087	4,098	4,108	4,119	4,130	4,140	4,151	4,162	4,173
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles	157	157	158	158	159	159	159	160	160	161	161	162	162	162	163	163
Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inert Wastes	23,095	23,155	23,215	23,275	23,335	23,395	23,456	23,517	23,578	23,639	23,699	23,761	23,823	23,884	23,946	24,007
Hazardous Waste	687	689	691	692	694	696	698	700	701	703	705	707	709	710	712	714
Disposable Diapers	35	35	35	35	35	35	36	36	36	36	36	36	36	36	36	36
Remainder	1,885	1,890	1,895	1,900	1,905	1,910	1,914	1,919	1,924	1,929	1,934	1,939	1,944	1,949	1,954	1,959
Total	39,718	39,821	39,925	40,028	40,131	40,234	40,339	40,444	40,548	40,653	40,757	40,863	40,969	41,075	41,181	41,287

TABLE 3-14

PROJECTED INDUSTRIAL WASTE DIVERSIONS—Existing Solid Waste Conditions

Category	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cardboard & Brown Bags	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mixed Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Newspaper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
High Grade Ledger Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Paper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HDPE Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LDPE Plastics	121	121	122	122	122	123	123	123	124	124	124	124	125	125	125	125
PETE Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PP Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PS Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PVC Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Plastics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refillable Glass Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRV Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Recyclable Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Non-Recyclable Glass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aluminum Cans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bi-Metal Containers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tin Cans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Ferrous Metals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
White Goods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yard Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food Waste	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tires & Rubber	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood Wastes	4,632	4,644	4,656	4,668	4,680	4,692	4,704	4,717	4,729	4,741	4,753	4,766	4,778	4,790	4,803	4,815
Agricultural Residues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Textiles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leather	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inert Wastes	751	753	755	757	759	761	763	765	767	769	771	773	775	777	779	781
Hazardous Waste	225	226	226	227	227	228	229	229	230	230	231	231	232	233	233	234
Disposable Diapers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Remainder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	5,729	5,744	5,759	5,774	5,789	5,803	5,819	5,834	5,849	5,864	5,879	5,894	5,909	5,925	5,940	5,955

Section 4

Source Reduction Component

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

4.2 Source Reduction Component Goals and Objectives[18733.1, 18734.1
(a)(1)(2)(3)(4)(5)(6)]

Each city is required to examine and select specific objectives to be accomplished during the short-term and medium-term planning periods of the SRRE. Based upon this requirement, the City of La Habra has selected the following specific objectives for implementation.

4.2.1 Component Goals

- To develop a Source Reduction program to meet the needs of the City and comply with the requirements of the California Integrated Waste Management Act of 1989.
- To reduce, in combination with recycling and composting, the amount of solid waste generated within the jurisdiction of the City at its source by 25 percent by the year 1995 and by 50 percent or as much as feasible by the year 2000.

4.2.2 Short-Term Objectives (1-5 years)

The following objectives will be obtained by a combination of source reduction programs. To estimate the reduction of wastes disposed of at landfills through implementation of source reduction measures is difficult. The solid waste generation analysis from Orange County provided a breakdown of disposed waste primarily by material type. When targeting products such as packaging, repairable products, or disposable products for source reduction program development, the analysis is not very useable.

As a result, quantifying source reduction may only be considered an estimation. The agglomerate effect of source reduction measures has been conservatively estimated to be small. For the short term planning period, the agglomerate effect is estimated to be an overall reduction by 2%. The reduction will be the result of fulfilling the following objectives:

SECTION 4 SOURCE REDUCTION COMPONENT

4.1 Introduction

Source reduction involves adaptations in the design, manufacture sale, and use of products to reduce the quantity and toxicity of solid waste generated when the products reach the end of their useful lives. To achieve source reductions the ultimate destiny of products must be considered when making production and materials decisions. Source reduction may occur through the design, manufacture, and packaging of products with minimal material, a longer useful life, or a minimal toxic content. The control of these types of source reduction activities may be most efficiently and effectively performed at state and federal levels. Source reduction may also be practiced at the household or corporate levels through selective buying patterns and reuse of products and materials. These types of activities are easier to implement and monitor at a local level.

Currently, there is no widely applied concept of source reduction. Thus it has been difficult to estimate the actual impact of source reduction programs on the municipal waste stream. However, the benefits of source reduction are conceptually clear; landfill capacity and natural resources are conserved, less energy is used during product manufacture, and air, water, and land pollution are reduced.

Source reduction programs generally fall into four broad categories:

- Rate Structure Modification Programs
- Financial Incentive Programs
- Technical Assistance Programs, and
- Regulatory Programs

Under each of these categories are numerous specific source reduction programs that will be further described and evaluated within this component.

- Develop a program of technical assistance to the commercial and industrial sectors and non-profit groups by 1992 to guide their participation in source reduction activities as well as recycling and composting.

4.2.3 Medium-Term Objectives (5-10 years)

For the medium term, the agglomerate effect of the selected source reduction programs is an estimated 4% reduction. The reduction would be a result of continuing to meet the short term objectives as well as the following additional objectives:

- Encourage reduction in the use of non-recyclable products and materials by an additional 15 percent by 2000.
- Encourage the reduction in the amount of packaging generated by an additional 20 percent by 2000.
- Increase the purchasing of repairable products by an additional 3 percent by 2000.
- Encourage the reduction in the use of disposable products and materials by an additional 20 percent by 2000.
- To evaluate a variable-can-rate for all solid waste collected within the jurisdiction of the City by 1997.
- As a contingency measure, to assist and encourage the residents of La Habra to establish backyard composting programs, including mulching, by 1997 and to reduce the amount of yard wastes generated by 20 percent by 2000.

4.2.4 Targeted Materials

[18733.1, 18734.1 (b)(1)(2)(3)(4)]

Source reduction programs generally target products rather than material. For this reason, the City of La Habra has targeted specific products for source reduction implementation. These products fall under four basic categories:

- Encourage the reduction of the use of non-recyclable products and materials by 12 percent by 1995.
- Encourage the reduction of the use of disposable products and materials by 8 percent by 1995.
- Encourage the reduction of the amount of packaging generated by 15 percent by 1995.
- Increase the purchasing of repairable products by 3 percent by 1995.
- Encourage the increased efficient use of products by 5 percent by 1995.
- Develop an awards program in 1991 to issue awards and other types of public recognition to businesses and non-profit groups that participate in or establish source reduction programs. Present first awards in 1992.
- Develop non-procurement source reduction programs by 1992 to educate residents and the workforce to implement source reduction measures applicable to their situations, such as double-sided copying. Implement first non-procurement campaign by 1993 to target a major waste generator category.
- Evaluate and modify the City's procurement policy to include source reduction objectives by 1993.
- Develop and implement a system of voluntary solid waste reduction plans for businesses and industries by 1993 to help them target source reduction measures for their solid waste streams. As a contingency, consider mandatory participation.
- Develop and implement a system of waste evaluations for businesses and industries to help them target source reduction measures for their solid waste streams. By 1993, perform waste evaluations for 15 percent of the generators, starting with the largest generators.
- Assist in the development of a comprehensive school curriculum by 1994 which teaches the benefits of source reduction as well as recycling and composting.
- Develop public information material for the general public by 1992 to instruct the public on ways to reduce waste and on the benefits of source reduction.
- Encourage the implementation of a consumer awareness programs, seminars, and public forums by 1993 that teach source reduction as well as recycling and composting.

4.2.4.3 Inefficient Products

Inefficient products include products that reach the end of their useful lives too quickly, such as some appliances and flashlights. Products are not always identified as inefficient, but when compared with other more efficient models, they appear inefficient. Sources of these wastes are mostly residential. Inefficient products comprise a large portion of the municipal waste stream by weight. Again, many are made from non-renewable resources and could be replaced with more efficient products.

4.2.4.4 Toxic Household Products

Toxic household products include cleaners, polishes, disinfectants, deodorizers, aerosols, batteries, automotive chemicals, paints, solvents, thinners, pest and weed killers, pool chemicals and photographic chemicals. Many of these products are extremely hazardous, and can be harmful to their users and the environment. When disposed of, these products potentially can cause soil, air, and groundwater contamination. The sources of these products are residential, commercial, and industrial users. These products make up only a small percentage of the municipal waste stream both by volume and weight. Many of these products can be replaced with less toxic ones or can be used in smaller quantities. A list of alternative, non-toxic household products are contained in the City's Household Hazardous Waste Element (HHWE).

4.3 Existing Conditions Description

[18733.2, 18734.2 (a)(1)(2)]

Each city is required to identify and quantify the current source reduction activities operating within the City by both public and private entities.

4.3.1 County-Wide Programs

Several programs implemented by Orange County focus on reducing waste. These programs include reduction of waste paper, revision of the procurement policy, and developing education programs.

TABLE 4-1
CRITERIA FOR TARGETING MATERIALS

Category	1	2	3	4	5	6
Disposable Products	X			X	X	
Wasteful Products	X	X		X		X
Inefficient Products		X		X	X	
Toxic Household Products				X		X

Legend

1. High volume material (18733.1, 18734.1(b)(1))
2. High weight material (18733.1, 18734.1(b)(1))
3. Hazardous material (18733.1, 18734.1(b)(1))
4. Made from non-renewable resources (18733.1, 18734.1(b)(2))
5. Useful life of Materials (18733.1, 18734.1(b)(3))
6. Limited recyclability (18733.1, 18734.1(b)(4))

4.2.4.1 Disposable Products

Examples of disposable consumer products are paper and plastic plates and cups, plastic utensils, paper towels and napkins, paper and plastic shopping bags, and disposable diapers. Sources of these wastes are residential and commercial users such as fast-food restaurants. Disposable products comprise a significant portion of the municipal waste stream by both volume and weight. Many are made from non-renewable resources such as plastics, glass, and metals. Many of these products can be replaced with reusable ones such as reusable plates and cups, rechargeable razors, and cloth diapers.

4.2.4.2 Wasteful Products

Wasteful products include products that use more materials than necessary for their packaging and shipping. Examples of wasteful consumer products are small food quantities packaged in individual containers (such as frozen dinners), double and triple wrapped items and heavily advertised items such as toys. Sources of these wastes are residential and commercial users. Wasteful products also comprise a significant portion of the municipal waste stream by both volume and weight. Many are made from non-renewable resources and could be replaced with less wasteful ones, e.g. products sold in bulk and products with limited or no packaging.

It is likely that these existing programs will also be expanded with the implementation of the County's new source reduction programs although they are not expected to impact solid waste management activities or impact the solid waste diversion mandates.

4.3.1.3 Educational Programs

The County is promoting acceptance and use of recyclable products by educating County employees and citizens.

In July 1990, the County sponsored a "Recycled Products Fair" to introduce products made of recyclable materials to County employees, the public, businesses, industries, and to municipalities. At the fair, vendors displayed their recycled products and provided information. It is intended that this fair become an annual event.

Numerous brochures have been produced by the County to inform the public of ways to reduce their waste by reusing products, buying in bulk, purchasing products made of recyclable materials or with minimal packaging, and to compost yard waste at home. These brochures have been distributed at town-hall meetings and public relations events, mailed to citizens in communities running recycling programs, and made available to other interested parties.

"Every Step You Take," is a source reduction and recycling video produced by the County to increase public awareness of source reduction activities. It has been shown on local cable television stations and during public meetings, and distributed to schools, cities, community groups and other interested parties.

The County has entered into a contract with the California State University at Fullerton to develop and conduct a community survey to assess public awareness of and participation in recycling and source reduction activities. This survey will be used to provide information for planning and expanding public education activities, promoting waste reduction measures, and providing baseline data to monitor the progress of these programs.

The experience and knowledge gained by the County through its waste management and procurement practices have resulted in a high demand for information from the public and other jurisdictions. Presentations on the County's procurement and waste management practices have been made before various groups in an effort to share knowledge, and encourage the solid waste reduction.

4.3.1.1 Orange County Integrated Waste Management Department

The County Integrated Waste Management Department has implemented the following waste reduction activities:

- Double-sided copying
- Routing memos, magazines, and newspapers rather than copying or purchasing multiple subscriptions
- Increasing use of personal computers to reduce the use of paper, and
- Implementing an electronic mail system

Because no accurate records have been kept of these activities, quantities cannot be determined for source reduction credit. It is likely that these programs will be expanded with the implementation of the County's new source reduction programs. The programs are not expected to impact existing solid waste management activities or impact the solid waste diversion mandates.

4.3.1.2 Procurement Policy

The County procurement policy was re-evaluated and goals were established to:

- Purchase reusable products and materials,
- Promote the use of recyclable products,
- Reduce the County's waste stream through source reduction, and
- Encourage vendors to submit double-sided documents in response to all requests for quotation, invitations for bids and requests for proposals.

Note that the County reallocates surplus furniture, appliances, computers and other reusable items to County agencies and departments. Surplus items that cannot be reused within the County are sold to private firms. Approximately 1,300 items (481 cubic yards), have been reused within the County during 1989. Another 10,000 items (2,674 cubic yards of reusable and scrap items), were recycled by private firms and diverted from landfills. These are estimated figures obtained from the Orange County surplus warehouse staff.

Alpha Beta processes a very large number of pallets on a daily basis. Pallets that were formerly regarded as waste are now sorted for repair or for salvaging. The salvaged wood is used as replacement members in other pallets. Approximately 140 tons are processed per month with only 35 tons discarded as waste. The discarded pallets are recycled.

Alpha Beta also diverts 1 ton per month of batteries from the waste stream. The batteries are sent to a battery remanufacturer and are subsequently reused.

The residents of La Habra, the private commercial and industrial sectors of the City, and other private institutions located within the City have voluntarily participated in source reduction activities. The following is a list of source reduction activities currently operating in the City:

- Selling reusable cloth shopping bags at grocery stores
- Cash rebates for paper and plastic shopping bags at grocery stores
- Using cloth diaper services
- Using rechargeable batteries in place of disposable ones
- Using reusable products, e. g. plastic and metal lunch boxes instead of paper and plastic bags
- Making double-sided photocopies
- Many clothes stores are reusing coathangers
- Removing of residents and businesses from "junk mail" mailing lists
- Purchasing condensed, concentrated, and bulk products
- Purchasing products without or with limited packaging
- Home mulching and composting of yard and food wastes
- Repairing, cleaning and reusing household appliances and clothes
- Donating household items to charitable organizations
- Using extended-life tires
- Purchasing of long-life, energy efficient light bulbs
- Installing voice mail systems at businesses and industries
- Using cloth bags in place of disposable bags for groceries

The City conducted a mail survey to evaluate what types of source reduction practices are used by businesses. The survey is a first step in recognizing and eventually quantifying source reduction measures. Table 4-1 is a summary of the survey results.

Because no accurate records were kept of these activities, no quantities were determined for source reduction credit. These programs will also be expanded with the implementation of the County's new source reduction programs. The programs are not expected to impact existing solid waste management activities or impact the solid waste diversion mandates.

4.3.2 City-Wide Programs

The City of La Habra has never directly implemented a source reduction program within its jurisdiction. However, the City, as well as other public institutions within the City, have participated in several voluntary source reduction activities, including:

- The use of double-sided photocopy machines,
- Purchasing products without or with limited packaging,
- Selling surplus office supplies at police auctions, and
- Diversion of green wastes and road materials from landfill.

The City of La Habra has purchased 5 double-sided photocopy machines, and has made an attempt to use these machines to their full potential when possible. This is in conjunction with use of recycled paper for some mailers and questionnaires and use of recycled laser printer toner cartridges. Since all of these activities were voluntary, no accurate records were kept to quantify the waste reduction.

It is likely that these programs will be expanded with the implementation of the City's new source reduction programs. They are not expected to impact existing solid waste management activities, or impact the solid waste diversion mandates.

4.3.3 Private Source Reduction Activities

Alpha Beta is the only known industry that practices source reduction and quantifies the savings. Alpha Beta's source reduction program reduced their waste stream by 1,276 tons in 1990. This information was reported by Alpha Beta in response to a survey issued by the City through their consultant. The reported quantities were verified by a site visit and interview with Mr. Roger Vander Wende, the Yard Services Manager for Alpha Beta.

TABLE 4-2
SOURCE REDUCTION PRACTICES BY BUSINESS
IN LA HABRA: 1991

Source Reduction Type	Number of Businesses with Existing Source Reduction	Percentage of Responding Businesses with Existing Source Reduction
Reusable items vs. disposable	118	51.98
Reusable packaging materials	132	58.15
Use of old reports as scratch paper	124	54.63
Donation, sale or trade-in of old equipment	92	40.53
Cloth shopping bags vs. plastic	4	1.76
Cash rebates for recyclable/reusable items	5	2.20
Waste reduction incentives for employees	5	2.20
Double-sided copies	52	22.91
Retreaded tires for company vehicles	21	9.25
Electronic voice mail systems	31	13.66
Purchase of recycled materials	63	27.75
Purchase of easily recyclable materials	66	29.07
Cloth towels/air dryers for use in bathrooms in place of paper towels	50	22.03
Mulching, chipping or composting any yard wastes on-site	11	4.85
Equipment maintenance contracts	108	47.58
Employee education on efficient use of office supplies	122	53.74
Purchase of smaller, more efficient, and less resource intensive product	95	41.85
Rechargeable batteries	51	22.47
Less toxic cleaning or gardening products	101	44.49
Regulate use of environmentally destructive products	86	37.89
Other recycling or waste reduction programs	73	32.16

Source: Kleinfelder Business Survey January - February 1991

Because no source reduction activities have been coupled with evaluation and monitoring programs, it is difficult to estimate total impact on the municipal waste stream. No efforts were made to quantify the solid waste reduction. As a result, only Alpha Beta's program provides quantities of source reduction. The initial step in implementing a source reduction program will be to develop base line data for City and privately operated programs.

4.3.4 Planned Future Source Reduction

[18733.2,18734.2(a)(3)]

It is expected the previously listed programs will further develop and expand as stricter requirements are placed upon residents and businesses of La Habra by local, state, and federal governmental entities.

It is not the intent of the SRRE implementation to reduce the scope of source reduction occurring through existing activities.

4.4 Identification and Evaluation of Alternative Source Reduction Programs

Each city is required to include an evaluation of source reduction alternatives that will be considered for local implementation for the purpose of achieving the required goals and objectives. Based upon this requirement, the City of La Habra has selected for evaluation the source reduction programs that are described in Sections 4.4.1 through 4.4.4. The programs are divided into the following categories:

- Rate Structure Modification Programs
- Financial Incentive Programs
- Technical Assistance Programs
- Regulatory Programs

4.4.1.1 Local Ordinances and Policies

Local ordinances could be adopted to specify product or material durability, reusability and/or reduced packaging. Durable products have an extended useful life, such as tools and appliances that have extended or lifetime warranties. An example of reduced packaging would be single wrapped versus double wrapped products. Reusable products eliminate the need for many disposable ones. Disposable consumer products include paper and plastic plates and cups, paper towels and napkins, plastic forks, and other products.

Changing local ordinances may also include adoption of mandates requiring compliance with specific source reduction programs, e.g. waste evaluations and solid waste reduction plans for businesses, and elements of backyard composting for residents and appropriate businesses.

Local policies address waste reducing practices such as double-sided copying. The City's policies may be used as examples for others in the community and may influence the purchase of double-sided photocopy machines, reusable coffee cups, and other targeted items.

City's Role The City would review local ordinances and make changes as appropriate. Some changes may be better addressed on a regional or state level. Therefore some ordinance and policy changes would be made in a cooperative effort with the County or State, depending on the scope of the ordinance.

Local policies may be revised by the City to require waste reducing practices such as double-sided copying within City offices and by contractors to the City.

Adoption of mandates for waste evaluations, solid waste reduction plans for businesses, and backyard composting would be considered as a contingency after other source reduction programs have been implemented. If other programs do not meet their objectives, source reduction mandates will be considered.

4.4.1.2 Financial Incentives and Disincentives

City's Role The City of La Habra can establish financial incentives and disincentives for source reduction by attaching or reducing fees to land-use and development permitting fees. The City may also place conditions of approval on development projects by requiring a plan for source reduction measures.

Section 4.4.5 contains the evaluations of the programs. All of the programs are evaluated according to the same set of criteria. Each of the criteria are discussed in detail in Appendix A. The criteria are assigned weighting factors because the criteria do not represent considerations of equal importance. The weighting factors are the same whether the programs that are evaluated are source reduction, recycling, or composting programs. These criteria are:

- Waste Reduction Effectiveness
- Total Costs
- Potential Institutional Barriers
- Consistency with Local Plans Policies, and Ordinances
- New or Expanded System Requirements
- Early implementability
- Acceptability by the Public Sector
- Acceptability by the Private Sector
- Potential Environmental Impacts
- System Flexibility
- Changes in Waste Type Generation or Use

The programs are assigned a rating of 1 through 10. One indicates a low rating and 10 indicates a high rating. The ratings are multiplied by the weighting factors assigned to the criteria to provide a relative ranking. A high ranking indicates high suitability for La Habra conditions in order to achieve the mandated goals. The evaluations are presented in tabular form in Section 4.4.5. A summary of the ranking is presented in Section 4.5.5.

4.4.1 Regulatory Programs

[18733.3, 18734.3 (c)(4)]

Regulatory programs include:

- Local Ordinances and Policies
- Financial Incentives and Disincentives
- Solid Waste Reduction Plans
- Product Bans

4.4.2.1 Loans, Grants, and Loan Guarantees

The purpose of this program is to provide funds to groups so that source reduction measures may be implemented. Sources of the funds would be from:

- Surcharges to the landfill tipping fees,
- Surcharges to the waste collection fees,
- A portion of revenue generated from City operated recycling and composting programs, if any,
- A portion of increased business license fees for businesses that do not participate in source reduction measures, and
- Loans, grants, and loan guarantees made available from the State.

City's Role: The City would establish a special fund for loans and grants to businesses, industries, non-profit groups, and institutions to assist them in implementing source reduction programs. The City would administer the fund initiation, collection and allocation tasks.

An alternative to the City developing a special fund for use by businesses within the city would be to assist and inform businesses of funds available from the Department of Conservation and the California Integrated Waste Management Board. To encourage local groups to apply for State allocated funds, the City could educate groups of the availability of funds and potentially provide assistance to them in applying.

4.4.2.2 Deposits, Refunds, and Rebates

The objective of a deposits, refunds, and rebates alternative would be to implement programs similar to the one used at Ralph's supermarket where a 5 cent rebate on purchased plastic shopping bags encourages consumers to sell back or reuse their bags. The purchased bags are reused by the store or recycled. Similar programs have been established by the State of California on aluminum, glass, and plastic beverage containers to encourage recycling.

City's Role: The City of La Habra would work with the State and with grocery stores and other appropriate businesses to establish deposits, refunds, or rebates on identified products.

4.4.1.3 Solid Waste Reduction Plans

A solid waste reduction plan would be produced by businesses and used to identify areas where waste production could be reduced. The plan would identify a list of source reduction activities the business could adopt to reduce specific waste materials or items.

City's Role: As a condition to the issuance or renewal of business licenses, the City could require each business to develop a Solid Waste Reduction Plan. The City would assist the businesses by providing information on programs they can easily implement, such as purchasing reusable coffee cups and utensils. Once the business has agreed to a program, City staff may visit the office to verify the program. Penalties may occur if a business is found in violation of the plan.

4.4.1.4 Product Bans

Bans on products are an extreme, yet effective way to reduce the use of targeted products. Some cities in California, including Berkeley and Irvine, have adopted bans on styrofoam products. Although these bans have not been specifically implemented for source reduction, they can eliminate the use of certain wasteful products, such as Styrofoam cups and plates. In most cases, bans are most effective on a state or federal level. A ban on a product in one city would create a demand for that same product in an adjacent city, especially in Orange County where most of the cities adjoin each other. A consumer's purchasing habits are not bound by the limits of the City in which they reside. Overall, bans face many political and institutional barriers, and are usually not accepted by the general public and commercial sectors, especially packaging industries.

City's Role: For this option, the City would provide support of appropriate state-wide or nation-wide bans. The City would investigate potential bans and consider adopting bans on products that would be less controversial and clearly provide a source reduction benefit.

4.4.2 Financial Incentive Programs

[18733.3, 18733.4 (c)(2)]

Financial incentive programs include:

- Loans, grants and loan guarantees,
- Deposits, refunds, and rebates, and
- Business license fee modifications

choose to work with the waste hauler and/or recyclers to perform the waste audits and other sections of the waste evaluation process. The Public Services Department would be responsible for reporting the results of the program on an annual basis to the City Manager.

4.4.3.2 Support for Backyard (Onsite) Composting

Backyard composting is a process of diverting yard wastes (green wastes) from the waste stream before it is collected. Yard wastes would be collected by individuals and composted onsite. Because yard wastes comprise over 25 percent of the residential waste stream, onsite composting activities can make an effective source reduction program. Although referred to as "backyard" composting, appropriate businesses may also be targeted for adopting backyard composting thus, onsite composting serves as a better description of this process.

Although it is not technically accurate to include mulching in a composting program because it is not biologically degraded, mulching should be viewed as an important component of a onsite composting program. Mulching is the process of reducing the size of organic material and spreading the material in a layer on the ground surface in landscaped areas. Mulching is used to reduce evaporation (cut water demand), enrich the soil with organic matter, and deter weed growth.

City's Role: The City would provide information and technical assistance to residents, gardeners, nurseries, florists and landscapers to establish onsite composting programs. Information on onsite composting would be in the form of fliers or included in a City newsletter (see Section 8, Public Education). A contact person at the City would be available to provide information and coordinate composting events. The City would also establish a program to assist residents in obtaining composting equipment at discount prices.

4.4.2.3 Business License Fee Modification

A business license fee modification could either reduce fees for participating businesses or increase fees for nonparticipating businesses. Although license fees are generally not high, any financial impact to a business is an incentive.

City's Role: The City would modify business license fees according to the participation level of businesses and industries in source reduction activities. However, monitoring and evaluating participation rates would be largely dependent on implementation of other programs such as the waste evaluation and solid waste business plan programs (see Section 4.4.3). Note that some businesses may view higher fees as less expensive than implementing source reduction measures.

4.4.3 Technical Assistance Programs

[18733.3, 18734.3 (c)(3)]

Technical assistance programs include:

- Waste Evaluations
- Support for Backyard Composting
- Technical Assistance for Businesses and Industries
- Educational Programs
- Awards and Public Recognition
- Non-Procurement Programs

4.4.3.1 Waste Evaluations

A waste evaluation program would involve identifying the commercial and industrial waste generators, ranking them by quantity of waste generated, and contacting them to perform waste audits. The audits would consist of a waste sampling and evaluation of source reduction measures that may be implemented to reduce identified waste components. The program would also include an evaluation of potential recycling and composting alternatives. A list would be provided to the generator of contacts that may be interested in using a component of the waste stream as a resource or would collect the component for recycling or composting. The evaluation would also include a plan for source separating reusable, recyclable, and compostable materials such that impacts to business operations are minimized.

City's Role: The City's Public Services Department would be responsible for implementation of the waste evaluation program. The Public Services Department may

television and radio commercials, or by holding public seminars and forums. The City could also develop special event days, parades, or carnivals to encourage source reduction.

4.4.3.5 Awards and Public Recognition

Awards and other types of public recognition would be awarded to businesses, industries, and construction firms that successfully participate in source reduction activities. The program would give recognition by awarding nominal financial prizes, plaques, certificates, or public acknowledgement through announcements in local newspapers, radio, or television.

4.4.3.3 Technical Assistance for Business and Industry

City's Role: The City would provide technical assistance to businesses and industries to establish source reduction programs. Fliers or newsletters sent to each business would list potential programs and activities the business could adopt or participate in. The newsletter would address specific concerns or difficulties in source reduction faced by the private sector. The newsletter would also include federal and state contacts for technical assistance. City staff may also act as a liaison for businesses to assist them in obtaining guidance from federal and state agencies. City staff may work with specific selected businesses which may be able to offer insights on how they managed to reduce their waste stream. A contact person at the City would be available to provide information and coordinate events.

4.4.3.4 Educational Programs

Educational programs may be the most important aspect of implementing source reduction. Educational programs would encompass both school education and public education.

In an attempt to change the consumer habits of future generations, development of school curricula would take top priority in this program. Focusing a large percentage of educational efforts onto the schools may be the most influential factor for achieving the short and medium-term waste reduction requirements. School educational programs will also help maintain the levels of waste reduction. School curriculum programs will need to be selected and adopted by the City's school districts.

Education of the general public will be critical to the implementation of most source reduction programs, especially during the short and medium-term planning periods. A consumer awareness program would teach the general public the benefits of source reduction and effective purchasing choices.

City's Role: The City would initiate an educational program with two parallel tracks: one oriented toward providing waste reduction information to schoolchildren and the other geared to the general public. The school program would require close cooperation between the school district and City staff. Public education would be accomplished through letters, flyers, and other forms of advertisement such as newspaper ads and

4.4.4 Rate Structure Modification Programs

[18733.3, 18734.3 (c)(1)]

Only one program was identified that may affect waste generation and enhance source reduction:

- A variable waste collection fee

A second program was briefly considered: a variable tipping fee which would be charged according to whether waste disposed of at the landfill had already been processed to remove recyclable materials. This alternative was rejected for source reduction because source reduction activities cannot be quantified on the basis of truckloads delivered to the landfill.

4.4.4.1 Variable Waste Fee Collection

Two alternatives were identified for a variable waste collection fee: fee based on volume and fee based on weight. With either alternative, waste generators that reduce their solid waste generation through source reduction, recycling or composting will save money. This is the primary incentive associated with this program. The drawback to a variable rate program is the lack of acceptability by the residential sector. People are reluctant to pay perceived new or additional fees. Resistance of this type could promote illegal dumping in open areas or in commercial bins. However, studies of existing variable rate programs in other cities have indicated that acceptability levels generally increase with time once people see the benefits and fairness associated with the program.

ALTERNATIVE 1

City's Role: The City of La Habra can control and modify its own solid waste collection fees by developing a quantity-based variable user fee. The waste generators would be charged a cost-per gallon rate that increases with the number of gallons of waste collected. This could be interpreted into variable can rates and bin rates. For example, if a resident uses two cans, his cost per gallon for the first can would be less than the cost per gallon for the second can. Similarly, for permanent commercial customers the cost per cubic yard (c.y.) would be higher for a 3 c.y. bin than for a 2 c.y. bin as an example. Similar programs have been successfully implemented in many other cities nation-wide, including the City of Seattle.

City's Role: The program would be administered by City staff with the assistance of the planning commission or a specially selected committee. The awards would be funded by the City or in conjunction with adjacent cities or the County. Awards may also be conferred with the cooperation of the Chamber of Commerce or similar community group.

4.4.3.6 Non-Procurement Source Reduction Programs

Non-procurement source reduction programs are similar to educational programs in that they teach consumers and businesses the need for source reduction and how they can become involved. Non-procurement programs refer to activities that attempt to change people's consumer attitudes towards specific materials and products. Non-procurement programs also teach conservation and efficient use of materials. For example, these programs may promote double-sided photocopying or using the backsides of paper for notes and scratch-paper. The programs may encourage residents to remove their names from junk mail lists and encourage the use of voice mail or electronic mail computer programs to save large quantities of paper in businesses. The program may also target reduction in the use of specific disposable products such as disposable diapers. The program may discourage the use of colored paper which is more difficult to recycle and may encourage circulating newspapers, journals, and magazines to others before disposing of them.

City's Role: The City would institute a program to identify materials that may be effectively impacted by a non-procurement campaign. Each campaign would focus on a group of generators that can readily perform nonprocurement actions to reduce waste. The most likely campaign to begin with would be to target single family residents with a campaign to reduce junk mail. Simple instructions providing methods to reduce junk mail would be included in newsletters produced by the City or placed in local newspapers as a public service along with a telephone number to a City staff person who can provide further assistance and guidance.

Other campaigns would focus on commercial offices where fliers produced by the City could be posted. The fliers would explain the benefits of source reduction measures such as using both sides of paper (including double-sided copying).

4.5.2 Total Costs

As a whole, source reduction programs are not considered costly. Most of the programs are rated from 6 to 9. The most costly program would likely be a variable waste collection fee. This is because the residential service charges are not tied to the number of cans set out for collection. The cans are owned by the residents who may set out an unlimited number of cans for collection. To institute a variable waste collection fee may necessitate ownership of the cans or carts by the City or waste hauler. The cost of the cans is the major cost item producing a low rating for this program.

Two programs which were rated 5 are the business license fee modification and the onsite composting. The business license fee modification would have ongoing costs stemming from the need to constantly monitor the program. Each renewal period would require a review of participation levels in source reduction activities by businesses. Because business licenses are renewed frequently, this may require significant staff time.

The onsite composting program has the potential to reduce significant quantities of yard and green wastes. However, the program is mainly education coupled with demonstration sites and events. To maintain a working level of composting principles and to continuously expose the populace to composting procedures would require a fairly extensive ongoing program that demands both staff and labor hours.

4.5.3 Potential Institutional Barriers

Eight of the source reduction programs are rated highly at either 8 or 9. Only very minor institutional barriers have been identified for these programs. Educational programs were rated 7 because schools may not be required to cooperate with presentation of source reduction material in the classroom. Efforts to secure this cooperation would be necessary to successfully implement school presentations.

Three programs were rated 6: waste disposal fee modification, onsite composting, and product bans. The first two programs may be impeded because other agencies such as state agencies may have authority for concerns which may be affected by the programs. For example, the Department of Health Services may require an evaluation of the effects of composting piles on vector populations. For product bans, institutional barriers may be the lack of authority by the city to impose product bans unless substantial evidence is presented for the need.

ALTERNATIVE 2

A more sophisticated approach to refuse collection fees would be to charge waste generators by the pound of refuse disposed. This is similar to the way other utilities, such as water, electricity, and gas are charged. This type of program would require each refuse bin to be weighed by a scale built onto the collection vehicle. Although more expensive to implement than a cost per gallon program, weight-based programs give waste generators more incentive to reduce their waste, rather than simply compacting it.

City's Role: The city's role would be the same as for Alternative 1.

4.5 Evaluation of Alternative Source Reduction Programs (18733.2, 18734.2 (a)(1)(2)(3)(3)(4)(5)(6) and (b)(1)(2)(3)(4))

The evaluation criteria described in Appendix A were used to rate the programs described in the preceding sections. The programs are assigned a rating of 1 through 10. The following twelve sections cover the twelve criteria used and how well the programs are able to meet the criteria. Criteria that were not used for this evaluation are: availability of markets and technical reliability. Markets are important for the success of recycling and composting programs only. Technical reliability was considered for composting programs only.

4.5.1 Waste Reduction Effectiveness

Most source reduction programs are difficult to quantify for actual waste reduction. A majority of the programs have been evaluated as moderately effective in reducing waste with ratings ranging from 4 to 6. Educational programs are expected to be more effective (7) as are financial incentives and disincentives (8) and solid waste reduction plans. The actual effectiveness of any of these programs probably will not be a result of a single program but the aggregate effect of education, City influence in the form of awards and incentives, and assistance with waste evaluations and solid waste plans, and mandatory enforcement.

Additional staffing requirements are the reason business license fee modification, waste evaluations, onsite composting, and solid waste reduction plans were given a rating of 6 or 7. Education programs were rated 7 because of the additional personnel hours required in the City and in the school district to implement the program.

The onsite composting program was rated 6 because it would require space for a demonstration program as well as staff to operate it.

The variable waste collection fee program would require space for container storage and repairs, and is incompatible with the existing collection system. The variable fee program is rated 3.

4.5.6 Early Implementability

The source reduction programs were evaluated according to how long it would take to start a program. The programs have been rated accordingly. Programs which could be started in 1991 were rated 9. Programs which could be started in 1992 (or possibly 1993) were rated 8. Programs which might be started in 1992 but more likely in 1993 were rated 7. Also, programs which could be started immediately but might not have effect for two or three years were rated 7. Product bans were rated 5 because a product ban would require a sizeable lead time to develop a case for a ban and to educate the community on the concerns associated with the product. The variable rate collection fee was rate 3 because the costs and community resistance associated with the program could easily delay its implementation for over 5 years. Implementation schedules are discussed in more detail in Table 4-18.

4.5.7 Availability of Markets

Availability of markets is not a consideration for source reduction programs. None of the programs were evaluated using this criteria.

4.5.8 Acceptability by the Public Sector

Many of the source reduction programs are primarily targeted for businesses. These programs are not expected to produce much response by the public. The programs include the business license fee modification, the waste evaluation, technical assistance for

The loans, grants, and loan guarantee program is rated 5 because of the potential lack of funds available to make a viable program. While funds may come from a variety of sources including several State agencies and programs, through waste collection and disposal fees and from revenue from recycling, the size of the program must fit the available funds. An effective program would need sufficient funds to stimulate source reduction activities.

The lowest rating of 3 was given to the variable waste collection fee and to the deposits, refunds, and rebates programs. For the waste collection fee, institutional barriers are in the form of public resistance to changes in the waste collection system and from the lack of existing structure to implement the program. For the deposits, refunds, and rebates program, the ability to implement deposits and rebates lies largely with State and federal agencies. While support may be provided by the City for development of state and federal programs, it is unlikely that the City could develop these programs at the local level.

4.5.4 Consistency with Local Plans, Policies, and Ordinances

None of the source reduction programs appear to have major conflicts with local plans, policies, and ordinances. Most of the programs are rated 8, 9, or 10. The loans, grants and loan guarantees program was rated 7 because some of the elements of the program would require levying surcharges on existing fees. The surcharges may not be consistent with policy to maintain low costs for waste collection services.

The variable waste collection fee program was rated 6 because local waste collection ordinances do not address waste collection in a manner that is conducive to a variable fee. Local ordinances may need to be reviewed and possibly modified to allow for this program.

4.5.5 New or Expanded System Requirements

Nearly all of the source reduction programs are moderately to highly compatible with existing systems. Existing systems primarily refers to city systems, staffing structures, and other city infrastructure. Some programs will require significant staff hours to implement. Consideration has been given to business and social systems. A few businesses may need to purchase equipment to repair and reuse products. Several programs have been rated 8, 9, or 10.

The waste evaluation and solid waste reduction plan were given moderate ratings of 6 and 7 because some time and effort will be required of businesses to participate in these endeavors. All of the other programs were also moderately rated except the business license fee program. The moderate ratings generally reflect the fact that most businesses will not be significantly impacted by the program although specific businesses will be impacted. For example, a deposit, refund, and rebate program would affect businesses handling products or materials that are targeted in the program. Onsite composting would affect businesses that produce green wastes, such as landscapers, nurseries, and florists. The business license fee modification program is expected to be universally disliked and has been given a rating of 3.

4.5.10 Potential Environmental Impacts

None of the source reduction programs are expected to produce potential environmental impacts except the onsite composting and deposits, refunds, and rebates programs. All other programs received a rating of 10. The onsite composting would need to be evaluated for vector and odor affects. The program is rated 6. The deposits, refunds, and rebates program could produce visual and noise impacts as well as changes in traffic patterns. Because these impacts would need to be evaluated the program has been rated 7.

4.5.11 System Flexibility

Most of the source reduction programs are moderately flexible and have been rated between 6 and 8. The variable waste collection fee program was rated 9 because it offers flexibility through changing rates and container sizes.

The least flexible programs involve product handling: the deposits, refunds, and rebates program and the product ban program. These programs may be difficult to change without reducing their impact once they are in place.

4.5.12 Changes in Waste Type Generation or Use

All of the source reduction programs are expected to have some positive effect on the type of waste generated or used except the product ban. Only a few product bans have been implemented. A product ban may cause a change in the type of waste generated but not in the amount of generated waste. The change in generated waste will not have a positive

businesses and industries, the non-procurement programs, and the financial incentives and disincentives programs. These programs have been rated 8 or 9. The educational program and the awards program are expected to be popular programs with support from the public sector. These programs were rated 10.

The onsite composting program was rated 9 for widespread public acceptability although this rating is contingent upon effective public education and a reasonable level of convenience that must be incorporated into the program.

Programs that may require changing public habits, such as the deposits, refunds, and rebates program, the local ordinances and policies program, and product bans were rated 6 or 7 depending on the anticipated level of change.

Programs that affected the cost of services, such as the rate structure modification programs, and the loans, grants, and loan guarantee program were rated according to the anticipated level of monetary impact that would be perceived by the public. The ratings range from 4 (variable waste collection fee) through 6 (waste disposal fee modification), to 7 (grants, loans, and loan guarantees).

4.5.9 Acceptability by the Private Sector

Acceptability by the private sector is a criterion that strongly reflects the perceived threat, impact, or benefit of a program by the private sector. Programs that may be perceived as beneficial include the variable waste collection fee for residents because it is likely that this will be perceived as a way to fairly share the load of increasing costs for waste handling. The program was rated 10. Other programs rated 10 were the awards program and the educational program. The awards program provide visibility and recognition to the business community. Public education would be perceived as another way of requiring everybody to share the responsibility of reducing waste.

Programs receiving a 9 rating were those that may not be perceived to threaten a business although the program is directed towards influencing businesses, i.e. the technical assistance program and non-procurement program. The loans, grants, and loan guarantee program also was rated 9 because some businesses will benefit greatly by this program and it may be perceived to enhance business opportunities.

TABLE 4-3
REGULATORY
PROGRAM EVALUATION
City of La Habra

Local Ordinances and Policies

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	6	22	132
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	6	2	12
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	10	3	30
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available		12	0
Total						86	100	652

effect unless it is coupled with other programs. For example, a ban on Styrofoam may increase the number of disposable paper products but will not change the amount of waste generated. Unless substituted paper products are produced of recycled paper, the program in itself does not produce a positive effect. Alternatively, the ban may have detrimental effects in other environmental areas. In this case, an increase in the demand for paper may impact the stability of forest lands as demands outstretch capacity. A product ban program was rated 5.

Most of the programs rated 6 or 7 are programs that target businesses. Of themselves, these programs may not be very effective unless they are coupled with local ordinances that mandate cooperation with waste reducing programs. The effect of local ordinances and policies on waste type generation or use is expected to be the highest and has been rated 10. The educational program was also rated 10 because of the anticipated effect on the waste generation habits of school children.

Onsite composting has high potential for changing the character of the waste stream because of the significant reduction in green waste that can be made. The program was rated 9.

Ratings of 8 and 9 were given to the awards program, variable waste collection fee, and the loans, grants, and loan guarantee programs because of the monetary impact these programs will have. One of the main objectives of these programs is to encourage changes in waste generation that reduce volume and increase reuse of materials and products. On this basis, waste type generation and use would be improved.

4.5.13 Summary of the Source Reduction Program Evaluations

The following Tables 4-3 through 4-16 detail the evaluations received in the preceding discussion. Each program was rated according to the identified criteria which are discussed in Appendix A except the criterion "availability of markets." Availability of markets is not relevant to source reduction criterion because source reduction does not create end products. Weighting factors assigned to the criteria are also in the Appendix. The ratings are multiplied by the weighting factors to produce a weighted rating or ranking.

The programs have been summarized and listed in order from highest to lowest ranking in Table 4-17.

TABLE 4-5
REGULATORY
PROGRAM EVALUATION
City of La Habra

Solid Waste Reduction Plans

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	7	22	154
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	7	28	196
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						86	100	653

TABLE 4-4
REGULATORY
PROGRAM EVALUATION
City of La Habra

Financial Incentives and Disincentives

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	8	22	176
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	6	2	12
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	7	3	21
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	8	4	32
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	7	28	196
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						85	100	664

TABLE 4-7
FINANCIAL INCENTIVES
PROGRAM EVALUATION
City of La Habra

Loans, Grants, and Loan Guarantees

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	6	22	132
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes In Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	8	3	24
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	8	7	56
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	9	8	72
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	10	4	40
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	7	2	14
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	5	4	20
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						85	100	661

TABLE 4-8
REGULATORY
PROGRAM EVALUATION

City of La Habra

Deposits, Refunds, and Rebates

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	6	22	132
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	7	3	21
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	3	2	6
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	7	3	21
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	6	8	48
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	3	4	12
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	9	28	252
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						70	100	620

TABLE 4-9
FINANCIAL INCENTIVES
PROGRAM EVALUATION

City of La Habra

Business License Fee Modification

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	6	22	132
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	3	8	24
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	6	4	24
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	5	28	140
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						79	100	541

TABLE 4-10
TECHNICAL ASSISTANCE
PROGRAM EVALUATION
City of La Habra

Waste Evaluation

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	6	22	132
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	8	2	16
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	7	3	21
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	6	8	48
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	7	28	196
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						86	100	628

TABLE 4-11
TECHNICAL ASSISTANCE
PROGRAM EVALUATION

City of La Habra

Support for Backyard Composting

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	5	22	110
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	6	3	18
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	9	3	27
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	8	7	56
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	9	5	45
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	6	4	24
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	6	4	24
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	5	28	140
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						76	100	530

TABLE 4-12
REGULATORY
PROGRAM EVALUATION

City of La Habra

Technical Assistance for Business and Industry

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	4	22	88
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	9	5	45
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	9	8	72
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	9	28	252
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						90	100	672

TABLE 4-13
TECHNICAL ASSISTANCE
PROGRAM EVALUATION
City of La Habra

Awards and Public Recognition

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	6	22	132
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	9	3	27
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	8	7	56
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						96	100	705

TABLE 4-14
TECHNICAL ASSISTANCE
PROGRAM EVALUATION

City of La Habra

Educational Programs

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	7	22	154
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	8	2	16
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	10	3	30
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	7	4	28
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	6	28	168
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						93	100	665

TABLE 4-15
TECHNICAL ASSISTANCE
PROGRAM EVALUATION

City of La Habra

Non-Procurement Programs

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	5	22	110
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	9	5	45
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	9	8	72
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	9	28	252
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						91	100	694

TABLE 4-16
RATE STRUCTURE MODIFICATION
PROGRAM EVALUATION

City of La Habra

Variable Waste Collection Fee

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	5	22	110
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	9	2	18
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	8	3	24
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	3	7	21
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	4	5	20
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	3	4	12
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	6	2	12
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	3	4	12
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	3	28	84
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						64	100	423

TABLE 4-17
SUMMARY OF SOURCE REDUCTION PROGRAM EVALUATIONS

Program	Weighted Rating
Awards and Public Recognition	705
Non-Procurement Programs	694
Technical Assistance for Business and Industry*	672
Educational Programs	665
Financial Incentives and Disincentives	664
Loans, Grants, and Loan Guarantees	661
Solid Waste Reduction Plans	653
Local Ordinances and Policies	652
Waste Evaluations	628
Deposits, Refunds, and Rebates	620
Business License Fee Modifications	541
Support for Onsite Composting	530
Product Bans	452
Variable Waste Collection Fee	423

4.6 Selection of Source Reduction Programs

[18733.4 (a)(b)(1)]

From the identified alternative programs, 7 programs were selected on the basis of overall implementability and effectiveness in the short-term with consideration also given to medium-term goals.

The programs were also evaluated on the basis of the data provided by the Orange County Solid Waste Generation Study although few waste categories were identified in the Study as products. Most categories were identified as materials. An exception is the category "disposable diapers." This product will be targeted through several programs with a specific campaign conducted through the non-procurement program.

4.6.1 Selected Alternatives

(18733.4)

Although the City of La Habra has very nearly attained the 1995 goal of 25% diversion, the City has developed a combination of programs designed to enhance public awareness and to boost participation rates for both the short- and medium-term planning periods. The combination of programs consists of:

1. **Awards and Public Recognition**--Initiate an awards program for businesses, institutions, and other groups that contribute to source reduction of the waste stream
2. **Local Ordinances and Policies**--Examine City procurement policy and modify to promote source reduction, such as reduction in purchase of disposable products.
3. **Non-Procurement Programs**--Promote efficient use of materials and reduction in wasteful products by residents, businesses, and others. Assist generators to identify specific products they can reduce or reuse.
4. **Solid Waste Reduction Plans**--Initiate a program to promote solid waste reduction planning by businesses. Promote awareness of waste generation, disposal, and diversion alternatives and benefits. Businesses shall identify specific wastes that may be reduced.
5. **Educational Programs**--Building on the public information program already initiated by the City and County, expand public information activities. Assist in the development and encourage implementation of public education and school education programs for reduction of disposable, wasteful, inefficient, and toxic products.
6. **Technical Assistance for Business and Industry**--Initiate a program to provide technical information and assistance to businesses to reduce production and use of disposable, wasteful, inefficient, and toxic products.
7. **Waste Evaluations for Business and Industry**--Initiate waste evaluations for businesses to identify and reduce disposal of disposable, wasteful, inefficient, and toxic products.

4.6.2 Short- and Medium-Term Diversion Quantities

(18733.4 (b)(2))

As stated in Section 4.3.3, baseline data does not exist for source reduction programs with the exception of the program operated by Alpha Beta Distribution Center. Until baseline data is collected, it is infeasible to evaluate each source reduction program individually in terms of weight, volume, or percentage. It is anticipated that source reduction will be achieved for each of the targeted waste types. Waste types were described in Section 4.2.4.

4.6.2.1 Short-Term

It is very difficult to quantify reductions to waste generation caused as a direct result of source reduction programs. A conservative estimate of 2% waste reduction is projected by 1995 as a result of the combined source reduction programs. This translates to approximately 2020 tons. These programs may be more effectively evaluated on the basis of the number of residents contacted, special events performed, and presentations given.

4.6.2.2 Medium-Term

For the medium-term, La Habra will focus on refining the selected programs in response to public and private participation rates. Refinements may include variations of the existing programs or the addition of programs to introduce additional target source reduction measures. In particular, onsite composting and a variable rate waste collection fee could be considered as program additions. Refinement of existing programs may include changing local ordinances and policies such as mandating waste evaluations and solid waste reduction plans for businesses.

With the improvements made to the selected programs and the possible addition of other programs, source reduction measures will likely cause a larger reduction in waste generation during the medium term than during the short-term. The increase in source reduction during the medium-term is estimated to reach 4%. This translates to approximately 4020 tons. As the public and private sectors' attitudes change toward waste as a result of public education efforts, additional increases will occur. In particular, as school children are exposed to the importance of waste reduction, these children will develop into teens and adults with improved waste generating habits.

4.6.3 End Uses of Diverted Materials

[18733.4 (b)(3)]

The objective of source reduction is primarily to reduce the amount of waste generated. On this basis, there will be virtually no end uses identified because the products will not be in the waste stream. By contrast, to several end uses identified for recycling and composting programs because their objectives are primarily to divert wastes.

The few end uses that will be identified during the implementation of the source reduction program will build on existing programs, such as the program conducted by Alpha Beta to reuse wooden pallets and batteries.

4.6.4 Methods for Handling and Disposing

[18733.4 (b)(4)]

Using the Alpha Beta model for reuse oriented programs, the City will work with businesses to identify equipment they may need to implement reuse programs. In other programs such as the non-procurement program, the City may need to assist offices to identify containers, signage, and space organization to effectively promote efficient use of materials.

Materials and products that are targeted for source reduction may still enter the waste stream eventually, such as paper with double sided copying. The waste materials will be handled by recycling programs as described in Section 5.6.4.

4.6.5 Facilities Utilized

[18733.4 (b)(5)]

Based on the evaluation in Section 4.5.5, no new or expanded facilities would be required to implement the selected programs. However, additional staff hours will be needed to administer the programs.

During the medium-term planning period, when onsite composting is adopted as a contingency measure to increase waste reduction, a new facility could be needed. The facility will require space and low technology equipment. An analysis will be performed at that time to determine whether a mobile demonstration unit will be incorporated into the onsite composting program. If incorporated, the mobile unit would require a vehicle, generator, small sized chipper, hand tools, bins, and staff to operate.

4.7 Source Reduction Program Implementation

Implementation of the seven programs is presented in tabular form in Table 4-18.

4.7.1 Responsible Organizations

[8733.5 (a)]

Table 4-18 shows the responsible organizations for each program.

4.7.2 Implementation Tasks

[18733.5 (b)]

The implementation tasks are shown in Table 4-18.

4.7.3 Implementation Schedule

[18733.5 (c)]

Table 4-18 shows the implementation schedule. The schedule includes both the short-term and medium-term planning periods. The schedule also indicates some of the stages when evaluation and reassessment of the programs will be necessary.

4.7.4 Cost and Revenue Sources

[18733.5 (d)]

Table 4-18 lists costs and revenue sources. Costs of implementing the selected source reduction programs will include staff time and effort of a Recycling Coordinator (Section 8) support staff, and materials. This latter category is estimated to cost \$9,000 to \$18,500 per year for staff and materials when all selected programs are implemented (1994). In 1991 only Local Procurement Policy revisions are scheduled for implementation. 1992, will entail the implementation of Technical assistance Programs for Businesses, Non-Procurement Programs, Solid Waste Reduction Programs, and Educational Programs as part of the Public Education and Information Component (Section 8).

Funding for monitoring and evaluation of all Source Reduction Programs are incorporated into the estimated annual costs on Table 4-18 and include administrative support.

**TABLE 4-18
SOURCE REDUCTION PROGRAM IMPLEMENTATION**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs
Technical Assistance Programs				
Waste Evaluations	Public Services Dept. Recycling Coordinator	Begin conducting waste evaluations on businesses	1994	\$12,000 - 15,000
Home Composting	Public Services Dept. Recycling Coordinator	Prepare documentation to encourage home composting activities	1995	\$5,000 - 7,000
Technical Assistance	Public Services Dept. Recycling Coordinator	Begin providing technical assistance to businesses	1992	\$2,000 - 4,500
Educational Awards	See Section 8	Prepare awards and plaques to recognize participating businesses	1993	\$500 - 700
Regulatory Programs				
Ordinance Revisions	Public Services Dept. City Manager City Council	Establish City agency non-procurement programs	1991	\$2,500 - 4,000
		Review any existing solid waste ordinances	1992	\$2,500 - 4,000
		Revise those which conflict with AB 939 goals.	1993	\$500
		Adopt local ordinances to encourage source reduction	1993	\$2,500 - 4,000
Purchasing Specification Revisions	Public Services Dept. Recycling Coordinator City Manager	Review purchasing and specifications	1992	\$2,000 - 4,000
		Revise specifications to promote recycling content, durability, and reuse ability	1992	\$500

TABLE 4-18
SOURCE REDUCTION PROGRAM IMPLEMENTATION

Program	Responsible Entity	Tasks	Schedule	Estimated Costs
Awards and Public Recognition	Source Reduction Specialist Planning Commission Planning Department City Manager City Council Various Community Groups	Identify categories of source reduction and generators within each category.	1994	\$500 - 1,000
		Establish first awards event. Publicize award recipients.	1994	\$500
		Annually review source reduction categories and identify worthy awards recipients.	1994	N/A
			1994 Ongoing	\$500 - 1,000 per year beginning 1995
Non-Procurement Programs	Source Reduction Specialist Planning Commission Planning Department City Manager	Develop detailed plan for non-procurement program. Select non-procurement action plan.	1992	\$1,500 - 3,000
		Initiate non-procurement action plan.	1992	\$1,000
		Incorporate non-procurement into the monitoring and evaluation program. Evaluate effectiveness. Implement next phase of plan.	Ongoing 1993	\$500
		Monitor, evaluate and continue to develop plan.	1994	\$500 per year beginning 1994

**TABLE 4-18
SOURCE REDUCTION PROGRAM IMPLEMENTATION**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs
Solid Waste Reduction Business Plans	Source Reduction Specialist Planning Commission Public Services Dept. Planning Department City Manager Waste Hauler	Develop action plan for waste reduction plan development by businesses.	1992	\$1,500 - 3,500
		Educate the private sector on waste reduction plans. Focus on large waste generators. Solicit voluntary development of waste reduction plans with City assistance.	1992	\$4,000 per year
		Continue with the same activities throughout short-term planning period. Work with largest to smallest generators.	1994	See previous amount
		Evaluate effectiveness of program. Establish program as mandatory if necessary.	1995	See previous amount
		Continue with program. Monitor and evaluate program for participation and effectiveness.		\$2,000 - 3,500

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**TABLE 4-18
SOURCE REDUCTION PROGRAM IMPLEMENTATION**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs
Educational Programs	Source Reduction Specialist	Develop priority agenda for public information, school education, and public education programs.	1992	\$2,000 - 4,000
	Planning Commission Planning Department City Manager City Council Various Community Groups Waste Hauler Certified Recyclers School Districts School Teachers	Work with school personnel to develop source reduction curriculum and presentations. Identify and contact groups for public presentations. Begin source reduction campaign.	1992	\$2,000 - 4,000 per year
		Continue with school and public information campaign. Monitor and evaluate annually. Modify program as needed to increase effectiveness and source reduction participation.	Ongoing	Included above

**TABLE 4-18
SOURCE REDUCTION PROGRAM IMPLEMENTATION**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs
Waste Evaluations	Source Reduction Specialist Planning Commission Planning Department Public Services Dept. City Manager Waste Hauler	Develop waste evaluation plan format and implementation plan targeting large waste generators first.	1994	\$3,000 - 5,000
		Notify generators of waste evaluation service available to businesses through the City. Perform waste evaluations and recommend source reduction measures beginning with largest generators first.	1994	\$7,000 - 10,000
		Continue to perform waste evaluations on a voluntary basis. Monitor and evaluate program effectiveness on an annual basis.	1995 Ongoing	
		Evaluate program effectiveness and whether program should become mandatory.	1996	To be determined

**TABLE 4-18
SOURCE REDUCTION PROGRAM IMPLEMENTATION**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs
Technical Assistance for Business	Source Reduction Specialist Planning Commission Planning Department City Manager City Council	Develop Implementation plan for development of a technical assistance program. Identify areas of greatest need for technical assistance, i.e. types of businesses and materials.	1992	\$2,000 - 4,500
		Begin presentations to business groups and distribution of newsletter and fliers.	1992	\$2,000 - 4,000 per year
		Continue with presentations, newsletter, and fliers. Monitor and evaluate program for effectiveness and participation.	Ongoing	See above
Local Procurement Policy	Source Reduction Specialist Planning Commission Planning Department Purchasing Department City Manager City Council	City Council to direct the Purchasing Department to review purchasing policy.	1991	\$1,500 - 2,500
		Purchasing Department to develop new purchasing specifications as applicable to include source reduction objectives.	1992	\$4,000
		Annually review policy, specifications, and purchased items to determine effectiveness of the program in reducing waste.	Ongoing	\$1,500

4.8 Source Reduction Program Monitoring and Evaluation

To monitor and evaluate source reduction programs, the following parameters must be considered:

- Methods used to evaluate achievement of objectives
- Criteria for evaluating effectiveness
- Agency responsible for monitoring and reporting
- Funding
- Contingency measures

4.8.1 Methods

[18733.6(a)]

Monitoring and evaluating the effectiveness of source reduction measures is very difficult. Unlike recycling or composting where real quantities of materials are collected and measured, source reduction monitoring and evaluating measures nothing tangible.

However, two of the selected programs will provide baseline information that will be used to evaluate changes in waste production: the waste evaluation and solid waste reduction plans for the commercial and industrial sectors. The programs will be used to evaluate the effectiveness of several source reduction programs as well as several recycling and composting programs.

General techniques for monitoring and evaluating participation and effectiveness will be recordkeeping and surveys. In particular, records submitted to the City by commercial and industrial generators, the City purchasing department, and institutions such as schools and hospitals will be used to evaluate effectiveness of programs. The records will be required on a quarterly or annual basis, depending on the generator.

A supplementary method may be used to conduct written or telephone surveys to evaluate participation and the obstacles to higher participation rates. A survey encompassing all generators would be performed on an annual basis. The survey would be designed to obtain information on all of the source reduction programs. Questions would address non-procurement activities such as reduction in junk mail by residents and the use of double-sided copying; the purchase of goods with high durability and repairability and increased diversion through use of commercial/industrial wastes as feedstocks by others.

Other surveys would be used in conjunction with specific educational programs to obtain feedback on the subjects presented in the programs. The surveys would target school classrooms, business associations, home owners' associations, and other groups which have received presentations.

4.8.2 Criteria

[18733.6(c)(1)]

Criteria for monitoring and evaluating would address the following questions:

1. Were the targeted source reduction objectives attained?
2. Did the responsible parties execute the required tasks?
3. Were the tasks implemented on schedule?
4. Did the targeted sectors participate in the anticipated manner?

4.8.3 Responsible Agency

[18733.6(c)(2)]

The designated source reduction and recycling specialist (Recycling Coordinator) will be responsible for the monitoring, evaluation, recommendations, and reporting. The report would be submitted to the Planning Commission for comments and recommendations, the Public Services Department, City Manager, and to the City Council for information and action as needed.

4.8.4 Funding Requirements

[18733.6 (c)(3)]

Funding for monitoring and evaluation of all reduction and diversion programs is discussed in Section 9 of the SRRE.

4.8.5 Contingency Measures

[18733.6 (c)(4)]

If the criteria identified in Section 4.7.2 are not met, the City will consider implementing contingency measures. In the event that La Habra appears unable to achieve the 2000 mandate with the programs adopted for the short-term, then additional programs will be considered for the medium-term. In particular, onsite composting, variable waste collection fee, and local ordinances and policy programs would be considered. The programs would be reevaluated according to the criteria so that changes in local conditions would be reflected. Other actions would be oriented to correcting specific aspects of the programs according to the following guidelines:

1. If the targeted source reduction objectives are not attained, the City will consider implementation of the following:
 - Survey the sectors involved to identify the reasons for the lack of program success.
 - Evaluate incentives.
 - Increase public education in terms of frequency and/or number of targets.
 - Revise objectives to reflect more realistic conditions.
2. If required tasks are not executed by the responsible agency, the City will consider implementation of the following:
 - Evaluate adequacy of City staffing and project time allocations.
 - Revise job and task descriptions.
 - Evaluate coordination between City divisions.
 - Identify reasons for lack of private sector participation.
3. If tasks are not implemented in a timely manner, the City will consider implementation of the following:
 - Evaluate adequacy of City staffing and project time allocations.
 - Revise job and task descriptions.
 - Evaluate coordination between City divisions.
 - Identify reasons for lack of private sector participation.
4. If target sectors fail to participate adequately or as anticipated in the recycling programs, the City will consider implementation of the following:
 - Survey the sectors to identify the reasons for their lack of participation.
 - Increase incentives through an awards program.
 - Increase access to technical assistance.
 - Increase appropriate education and promotional activities.
5. If some aspect of the source reduction program does not meet local, state, or federal regulations, the City will consider implementing the following:
 - Identify the problem areas.
 - Correct problems to meet local, state, and federal regulations.

SECTION 5 RECYCLING COMPONENT

Section 5
Recycling
Component

TABLE 5-1
RESOURCE MATERIAL FROM RECYCLED MATERIALS
NATIONWIDE STUDY

Category	1980	1985	1990	1995
Aluminum	1.0%	1.5%	2.0%	2.5%
Steel	1.0%	1.5%	2.0%	2.5%
Paper	1.0%	1.5%	2.0%	2.5%
Plastic	1.0%	1.5%	2.0%	2.5%
Glass	1.0%	1.5%	2.0%	2.5%
Other	1.0%	1.5%	2.0%	2.5%

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:
Kleinfelder, Inc.
Diamond Bar, California

Chapter 2 Recycling Component

City of the World
Final Draft
Sustainable and Regenerative Planning

Revised by
Brenda L. Leland

SECTION 5 RECYCLING COMPONENT

5.1 Introduction

Recycling has become an important aspect of municipal solid waste management and is the core of an Integrated Solid Waste Management Plan. This is caused by the rising costs and environmental impacts of solid waste disposal. Recycling is a responsible, cost-effective way to address solid waste disposal problems and helps preserve our natural resources, reduces pollution, and saves energy (Table 5-1).

TABLE 5-1
RESOURCE SAVINGS FROM USING RECYCLED MATERIALS
NATION-WIDE STUDY

Category	Paper	Glass	Steel	Aluminum
Energy	23-70%	4-22%	47-74%	92-97%
Air Pollution	74%	20%	86%	95%
Water Pollution	35%		76%	97%
Mining Wastes		80%	97%	
Water Use	58%	50%	40%	

Source: United States Environmental Protection Agency

Recycling is more than the separation and collection of post-consumer materials. It is also the reprocessing, re-manufacturing, marketing and reuse of materials. Only when these activities are included is the recycling loop complete. Planning for recycling is an ongoing process with continuous development of new programs and technologies. A good recycling program should be constantly modified and upgraded to adapt to changes such as market conditions.

REPORT: BIODIVERSITY

1.1. Introduction

The purpose of this report is to provide a comprehensive overview of the current state of biodiversity in the United Kingdom. The report will focus on the distribution and abundance of various species, including plants, animals, and fungi, and will discuss the factors that are influencing these patterns. The report will also provide recommendations for how biodiversity can be protected and enhanced.

TABLE 1
Biodiversity Data for the United Kingdom

Species	Plant	Animal	Fungi
1.1.1. Plant	1.1.1.1. Plant	1.1.1.2. Animal	1.1.1.3. Fungi
1.1.2. Animal	1.1.2.1. Plant	1.1.2.2. Animal	1.1.2.3. Fungi
1.1.3. Fungi	1.1.3.1. Plant	1.1.3.2. Animal	1.1.3.3. Fungi

The data presented in Table 1 shows that there is a significant decline in the number of plant species in the United Kingdom. This is due to a variety of factors, including habitat loss, climate change, and pollution. The number of animal species has also declined, but to a lesser extent than plants. Fungi species have remained relatively stable, but there is still a concern about the loss of certain species.

Common recycling programs may include elements of the following:

- Separated and Commingled Curb-Side Collection
- Multi-Family Residential Separated and Commingled Collection
- Drop-Off Centers
- Buy Back Locations
- Certified Recycling Centers
- Commercial and Industrial Recycling Programs
- Manual Material Recovery Facilities (MRFs)
- Mechanized MRFs, and
- Salvage at Solid Waste Facilities

5.2 Recycling Component Goals and Objectives

[18733.1, 18735.1(a)]

Each city is required to state the specific objectives to be accomplished during the short-term and medium-term planning periods of the SRRE. Based upon these requirements, the City of La Habra has selected specific objectives for implementation. The objectives are listed in Sections 5.2.2 and 5.2.3.

5.2.1 Component Goals

- To develop a recycling program that will meet the needs of the City and comply with the requirements of the California Integrated Waste Management Act of 1989.
- To reduce, in combination with source reduction and composting, the amount of solid waste generated within the jurisdiction of the City by 25 percent by the year 1995, and by 50 percent or as much as feasible by the year 2000.

5.2.2 Short-Term Objectives (0-5 years)

- Continue curbside collection of recyclable materials from single family residences throughout the short-term planning period. Encourage increased participation by 4% per year from the existing 40% up to 60% in 1995 through public education.

- Increase recycling of the total waste stream by 10% by directing commercial, industrial, multi-family residential, and construction/demolition wastes through a materials recovery facility by 1994.
- Encourage the increase of existing recycling participation through drop off centers and certified recycling centers by 20% by 1995 through technical support and public education.
- Develop or enhance City agency recycling programs to capture 15% by 1993 and 25% by 1995 of the City-generated waste stream.
- Revise the City procurement policy so as not to exclude recycled products and to provide a price differential to specific products with recycled content to encourage recycling markets.
- In collaboration with the County and/or other cities, encourage the increase in the amount of recycling by salvaging at the landfill of wastes hauled by independent haulers by 20% by 1995.

5.2.3 Medium-Term Objectives (5-10 years)

- Continue curbside collection of recyclable materials from single family residences throughout the short-term planning period. Encourage the increased participation to 80% by 2000 (4% per year) by public education and possibly by adding additional materials for recycling. As a contingency measure, the City will consider instituting mandatory recycling. As needed, expand the program to include cardboard and mixed paper collection so that approximately 12% of the total waste stream is diverted by this program.
- As needed, implement mandatory yard and wood waste separation and collection from single family residences and maintain a 70% participation rate by 2000.
- Continue to recycle the waste stream from the commercial, industrial, multi-family residential, and construction/demolition wastes through a materials recovery facility. As needed, include wood, yard, and mixed plastic waste recovery in the materials recovered by the MRF by 2000 so that about 12% of the total waste stream is diverted by this program.

- Encourage increased recycling participation through drop off centers and certified recycling centers by 40% by 2000 through technical support and public education.
- Develop or enhance City agency recycling programs to capture 30% of the City-generated waste stream by 2000.
- In collaboration with the County and/or other cities, encourage the increase in the amount of recycling by salvaging at the landfill by 14% by 2000.

5.2.4 Targeted Materials

[18733.1,18735.1(b)(1) and (2)]

Based upon the waste characterization studies conducted by the Orange County Solid Waste Management Department and the City the following materials were targeted for recycling:

TABLE 5-2
CRITERIA FOR TARGETING MATERIALS

Category	1	2	3	4
Cardboard & Kraft Paper	X			
Mixed Paper	X	X		
Newspaper	X	X		
High-Grade Ledger Paper	X	X		
HDPE Plastics	X			X
LDPE Plastics	X			X
PET Plastics	X			X
PP Plastics	X			X
PS Plastics	X			X
PVC Plastics	X			X
Other Plastics	X			X
Refillable Glass Containers		X		
CRV Glass		X		
Other Recyclable Glass		X		
Aluminum Cans		X		
Tin Cans		X		
Yard Wastes	X	X		
Wood Wastes	X	X		
Ferrous Metals		X		
Non-Ferrous Aluminum Scrap		X		

Legend

1. High volume material (18733.1(b)(1))
2. High weight material (18733.1(b)(2))
3. Hazardous material (18733.1(b)(3))
4. Made from non-renewable resources (18733.1(b)(4))

5.2.4.1 Corrugated Cardboard

Nation-wide, cardboard has been the largest single source of waste paper collected for recycling. The markets for good quality, baled cardboard have traditionally been steady. This is due to the large supply of cardboard from the municipal waste stream. Many commercial generators in La Habra, such as supermarkets and retail stores, already have in-house balers for preparing corrugated cardboard for mills.

Cardboard is currently recycled at a higher rate than any other material. Cardboard comprises nearly 50 percent of the recycled materials stream in La Habra based on the City of La Habra 1989 recycling survey. According to the Waste Characterization Study, 7.7 percent of the disposed waste is cardboard. This translates to about 4,320 tons.

5.2.4.2 Mixed Paper

Mixed paper was the second most prevalent material found in the Waste Characterization Study with 8.8% of the residential, 5.5% of the commercial, and 4.4% of the industrial waste streams for a total of about 3,540 tons disposed of in 1990. Mixed paper is usually collected from office buildings and industrial plants but can also be collected in residential recycling programs. Like newspaper, the market for mixed paper has also been unstable and revenues may not outweigh the costs to collect, process, and transport the mixed paper. It is important that the paper is properly segregated. Mixed paper often contains significant quantities of high quality paper which is valuable if separated. Contaminating materials such as rubber bands, inks, and coatings decrease the value of mixed paper since they must be removed during intermediate processing.

5.2.4.3 Newspaper

Old newspaper (ONP) was 3.7 percent of the residential waste stream and over 1 percent of the commercial waste stream and 1.4% of the industrial waste stream or about 1,230 tons disposed of in 1990. Nation-wide, newspaper is a commonly recycled material. The market for old newspaper fluctuates greatly because waste paper recovery rates have exceeded domestic mill capacity. This problem is more prevalent in states with mandatory recycling laws than in other states.

5.2.4.4 High-Grade Ledger Paper

High-grade paper includes computer paper, white ledger paper, key punch cards, and trim cuttings from industrial paper manufacturers. High-grade paper was found in small quantities in the residential and industrial waste streams (less than 1 percent) and just over 1 percent in the commercial waste stream for a total disposal of about 410 tons. Although a small percentage of the total waste stream, this material is easily collected with mixed paper in several programs and may also be collected separately directly from offices. The market for these materials has remained steady since good quality paper can be used as a direct substitute for wood pulp.

5.2.4.5 HDPE Plastics

Milk jugs and detergent bottles are examples of products made primarily from HDPE (High-Density Polyethylene) plastic. This type of plastic is recycled in small quantities. In the waste characterization study, HDPE plastics were over 1.3% in the residential waste stream, 2.9% of the commercial waste stream, and 1.8% of the industrial waste stream for a total disposal of about 160 tons per year. The markets for HDPE plastics are rapidly growing as new processing technologies develop. End-uses for recycled HDPE plastic include: non-food bottles, drums, pails, toys, pipes, sheet plastics, crates, and plastic pallets.

5.2.4.6 PET Plastics

Most plastic soft drink bottles are made of PET (Polyethylene Terephthalate) plastic which is the most commonly recycled plastic. In 1987, over one-hundred-million pounds of plastic soft drink bottles were recycled in the United States (U.S. Environmental Protection Agency). Recycling may have contributed to the fact that very small quantities of PET were found in residential, commercial, and industrial waste streams (less than 1 percent in each for a total of about 70 tons disposed of in 1990. End-uses for recycled PET include: plastic fibers for sleeping bags and jackets, injection moldings, non-food grade containers, structural foam molding, and chemicals.

5.2.4.7 Mixed Plastics

Mixed or commingled plastics consist of unsorted materials, including combinations of several plastic resins, and contaminants such as paper, wood, metals, and glass. Mixed plastics were found in large amounts in the waste characterization study, 3.4% of the residential, 5.3% commercial, and 14.7% of the industrial waste streams for a total disposal of about 4,590 tons. Mixed plastic processing is a developing technology and the markets for the materials are expected to increase. End-uses for mixed plastics include: park benches, trash containers, and car stops.

It is likely that other plastics that will be recycled in greater quantities in the future, such as polystyrene (PS), polyvinyl chloride (PVC), polypropylene (PP), and low-density polyethylene (LDPE).

5.2.4.8 Recyclable Glass

Nation-wide, glass is also one of the most commonly recycled materials, with about a 45 percent recovery rate in California (California Department of Conservation, Annual Report 1988-89). The market for post-consumer beverage container and other similar container glass has been steady although supply currently outstrips demand. According to the Waste Characterization Study, 1.8% of the residential, 1.3% commercial, and 0.75% of the industrial waste streams were comprised of California Redemption Value glass and other recyclable glass. This translates into about 640 tons disposed of in 1990.

Recyclable glass is often separated by color into one of three separate categories: clear, green, and brown. Separation can be accomplished at the source, at drop-off centers, or by hand pickers or optical sensors at material recovery facilities (MRFs). For recycling, glass should be clean and free of contaminants such as metal caps, ceramics, rocks, and dirt.

Glass recycling involves crushing used bottles and jars into small pieces to form a material called cullet. The cullet is sold to end-users who mix the cullet with sand, soda ash, and limestone to form new glass containers. Glass crushing can take place at recycling centers, intermediate processing centers, or at material recovery facilities.

5.2.4.9 Aluminum Cans

The demand for recycled aluminum is very high. It is estimated that it takes 95 percent less energy to produce an aluminum can from an existing one than from raw ore (U.S. Environmental Protection Agency). Aluminum is a high-value product and is the greatest revenue generator in many recycling programs. In 1988, over 50 percent of the aluminum cans produced in the United States were recycled (U.S. Environmental Protection Agency). California has a 68 percent recovery rate (California Department of Conservation, Annual Report 1988-89). Because of this, aluminum cans were found only in small quantities in both the residential, commercial, and industrial waste streams: less than 1 percent in each case for a total disposal of about 50 tons.

5.2.4.10 Nonferrous and Aluminum Scrap

Other sources of recyclable aluminum and nonferrous scrap are window frames, storm doors, sidings, gutters, and other demolition materials from industrial, commercial, and residential sources. These products are different grades of aluminum and have specific separation requirements.

The residential and industrial waste streams contain less than 1% each of nonferrous and aluminum scrap while the commercial waste stream contains 1.4% for a total disposal tonnage of about 280 tons.

5.2.4.11 Ferrous Metals (Tin Cans, Iron and Steel)

The residential waste stream from La Habra contains 1.8% ferrous metals. The commercial and industrial waste streams contain 7.8% and 6.1% ferrous wastes. The total disposed tonnage of ferrous metals is about 2,750 tons per year. Ferrous metals include tin cans and ferrous scrap.

Steel has the highest recycling rate in the world. Over 55 million tons of iron and steel were recycled in the United States and Canada in 1987 (U.S. Environmental Protection Agency). Steel cans used as juice and food containers are easily separated from the municipal waste stream by using powerful magnets. The market for ferrous metals is well established, the demand and market are steady, and are expected to increase as processing technologies improve. Most of the recycled steel has come from large items such as cars and appliances. Large scrap metal piles may be seen at landfills and transfer stations.

5.2.4.12 Yard Waste

Leafy and shrubby yard wastes comprise 33.8% of the residential waste stream, 5% of the commercial waste stream, and 9.7% of the industrial waste stream according to the Orange County Waste Characterization Study. This converts to 10,050 ton per year of the disposed waste. Yard waste may be recovered using the same technologies as would be used for other materials. Several diversion routes are possible: recycling the wastes by processing into mulch; composting (biological degradation); or processing into boiler fuel (transformation).

5.2.4.13 Wood Waste

Wood waste comprise 2.0% of the residential waste stream, 16.2% of the commercial waste stream, and 23.3% of the industrial waste stream according to the Orange County Waste Characterization Study. This converts to 7,710 tons per year that are disposed. Wood waste may be recovered using the same technologies as would be used for other materials. Several diversion routes are possible: recycling the wastes by processing into firewood or mulch; composting (biological degradation); or processing into boiler fuel (transformation).

5.3 Existing Conditions Description

[18733.2, 18735.2(a)(1),(2)]

Each city is required to identify and quantify the current recycling activities operating within the City by both public and private entities.

5.3.1 State Programs (Beverage Container and Litter Reduction Act)

In 1986, the California Beverage Container and Litter Reduction Act was passed. This act was designed to encourage and increase the level of recycling within the state by offering financial rebates on aluminum, glass, plastic, and non-aluminum metal beverage containers. With the implementation of the state recycling program in 1986, recycling rates for aluminum have increased to 68 percent, recycling rates for glass have increased to 45 percent, recycling rates for PET have increased to 6 percent, and recycling rates for non-aluminum metal have increased to 3 percent. As a result of the act, over 2,200 state certified recycling centers were established state-wide, including buy back centers at local

grocery stores. The state has provided funding to local conservation corps and organizations to assist in establishing recycling programs in commercial and government buildings, bars, restaurants, and recreational locations. The funding is also used for litter abatement projects, public education, and Convenience Incentive Payments (CIPs). Recyclers who qualify for CIPs are those who operate the only recycling center within a convenience zone. Convenience zones are areas established within a half mile of a major grocery store. A major grocery store is defined as a convenience zone if it subscribes to the Progressive Grocers Guide, sells over 117 different items including produce, and averages over \$2 million in sales. Currently, there are over 2,500 convenience zones located within the State.

Within the larger grocery stores in La Habra, the recyclable materials are collected mostly by private recycling companies such as Envipco, 20/20, Unicorn Metals, and U.S. Recycling. In the smaller grocery stores, collected materials are often donated to the store employees, who sell the materials to a privately owned recycling center, or donate the materials to a local church or school drop-off center.

The State of California plans to expand recycling by adding more containers to the California Redemption Value (CRV) program (California Department of Conservation). The containers would be similar to existing CRV beverage containers: HDPE containers such as milk and water jugs, polystyrene (Styrofoam) containers such as fast food packaging and coffee cups, and aseptic containers such as boxed juice containers. The quantities of these materials in the municipal waste stream will likely be reduced upon program implementation. This may impact existing or planned recycling programs such as curbside collection by reducing the quantities of available recyclables in the waste stream.

5.3.2 County-Wide Programs

Salvaging at each of the County's landfills is an ongoing recycling activity. Contracted salvagers pay to screen and harvest from the public waste unloading area to recover reusable goods. Commodities include furniture, white goods, toys, mattresses and tires. Approximately 131 tons of reusable material is diverted at the landfills through salvaging each year. Tonnage is verified by weighing the loads at the landfill. Assuming that 2.1 % of the recycling may be distributed back to La Habra based on its percentage of the county population, 3.6 tons per year are recycled from La Habra's waste stream by salvaging.

It is expected that this program will continue to develop and expand with implementation of the County's new recycling programs.

[18733.2(a) and (b)]

5.3.3 City-Wide Programs

The City of La Habra directed Western Waste to establish a curbside collection program for recyclables from single family residences. The program began in 1990. The program actually covers single family residences and small multi-unit residences with can service. Aluminum, PET and HDPE plastics, glass, newspapers, and steel cans are collected and transported to the CR&R materials recovery facility (MRF) in Stanton. Western Waste estimates a 40% participation rate by residents. Approximately 991 tons were diverted in 1990 based on analysis of reports issued by CR&R to Western Waste for the five months which Western Waste operated a curbside program in 1991.

In addition to curbside, the City of La Habra Public Services Division has initiated a recycling program for collection of high grade white paper from City offices. Small boxes are placed at work stations and other strategic locations such as near the photocopiers and printers. Paper collected in small boxes are emptied into centrally located bins. Western Waste collects the paper on a weekly basis. The amount of paper recycled in 1990 was negligible because the program began in the last quarter of 1990.

La Habra does not currently have a local market development program for recycled materials; instead it utilized CR&R to market recycled materials. Future development of local markets and procurement policies for use by the City purchasing agency are discussed in Sections 5.4.10 and 5.6.3. Other programs which have not yet been implemented but will be included in the SRRE are consumer awareness and incentives programs, economic development programs. The City has begun to produce informational fliers to educate the public as to the benefits of recycling, where to find certified recycling centers, what materials are redeemed, purchased, or accepted, and when they are open.

5.3.4 Private Programs

[18733.2 (a) and (b)]

Until curbside collection was implemented, waste diversion activities were performed at buy back, drop off, and certified recycling centers and scrap metal dealers. Several recycling locations and recyclers/scrap metal dealers are located in La Habra. Table 5-3 lists the waste hauler and State-certified recyclers located in La Habra, the materials they recycle, and estimated recycling rates.

CERTIFIED RECYCLERS

Certified recyclers are certified through the State and must adhere to strict record keeping and safety requirements. Sizeable quantities of recyclables are collected by certified recyclers, as summarized in Table 5-3. The centers receive materials from residences and businesses in La Habra. By actively pursuing industrial and commercial accounts, certified recyclers in La Habra are successfully establishing financial stability. Most of the materials received from the residents are California Redemption Value beverage containers and materials with recognized scrap value. Some white goods are accepted, but no payment is made for them.

TABLE 5-3
RECYCLING THROUGH CERTIFIED RECYCLING CENTERS
AND CURBSIDE COLLECTION
LA HABRA
1990

Recyclable Material	Certified Recyclers	Recycling Rates Per Recycler (Tons Per Year)	Total Recycling Rates (Tons Per Year)
Aluminum Cans	ENVIPCO 20/20 Unicorn Metals U.S. Recycling Western Waste*	10 N/A 205 71 8	294
Bimetal Cans	20/20	N/A	N/A
Computer Paper	U.S. Recycling	22	22
Glass (CRV)	ENVIPCO 20/20 Unicorn Metals U.S. Recycling Western Waste*	16 N/A 451 276 261	1,004
HDPE	Western Waste*	14	14
Newspaper	20/20 U.S. Recycling Western Waste*	N/A 627 670	1,297
PET	ENVIPCO 20/20 Unicorn Metals U.S. Recycling Western Waste*	5 N/A 44 11 8	68
Steel Cans	Western Waste*	31	31
White Goods	Goodwill Industries Unicorn Metals	N/A N/A	N/A
Total Recycling Rate			2,730

Unicorn Metals also buys and sells over 2,390 tons per year of ferrous and non-ferrous scrap metal.

NA = Not Available -- Considered proprietary information.

*Western Waste is the City franchise waste hauler.

BUYBACK CENTERS

Buyback centers are located at grocery stores or similar businesses where beverages may be purchased and beverage containers may be returned for redemption. Only two buyback locations are located in La Habra: one 20/20 Center at Albertson's on North Harbor Boulevard and one ENVIPCO vending machine center located at Von's on West Imperial Highway. Both the 20/20 Center and ENVIPCO are certified recyclers. The buyback centers recycle at lower levels than curbside and other types of certified recycling centers. The centers accept CRV materials only, i.e. glass, bi-metal, PET, and aluminum beverage containers.

DROP OFF CENTERS

Several newspaper drop off boxes are located in La Habra. The drop off boxes are typically operated by community organizations for fund raising. The collected newspapers are sold to recycling centers. As a result, no additional recycling from the residential generators may be accounted for beyond the amounts already identified in Table 5-3.

COMMERCIAL PICK UP

Some recyclers have exclusive commercial and industrial accounts for specific materials. The recyclers collect the materials from their customers and transport them to markets or to processing facilities. Only recycling activities that have not been discussed in previous sections are covered in this section.

Unicorn Metals Company is the only identified certified recycler that collects and recycles materials from commercial accounts. The recycler pays redemption and scrap values for the materials. Other groups or individuals recycle materials from commercial and industrial generators. For the most part, these groups appear to practice uncontrolled salvaging, i.e. scavenging.

The major recyclable commodity picked up from commercial and industrial accounts is cardboard. In 1989, the City Public Services Department performed a survey of most businesses located in La Habra. The survey identified businesses that recycle and which materials were recycled. Through this survey, it appears that 56% of the material is cardboard, i.e. 10,533 tons per year. Note that 7,842 tpy (75%) are generated by Alpha Beta.

COMMERCIAL/INDUSTRIAL IN-HOUSE RECYCLING

Alpha Beta is an example of one of many local businesses that have organized recycling operations within their own business. Alpha Beta has organized an extensive recycling program that diverts approximately 41.3% of the waste stream. According to the City survey, most businesses with established recycling programs recycle cardboard. These business separate the cardboard, bale it, and transport it to markets without the assistance of a recycler.

Other significant contributions to recycling are tires and wood, including sawdust. A summary of the survey findings is presented in Table 5-4. The survey results may contain quantities of materials that were already identified in previous tables. For this reason, Column 3 identifies only those quantities believed to be in excess of the previously identified quantities. Those categories which may have diversion quantities overlapping data in Table 5-2 are completely eliminated from Column 3.

Table 5-4
Commercial and Industrial Recycling
La Habra

Recyclable Material	Amount Recycled (tpy)	Amounts in Excess Of Quantities in Table 1-5
Aluminum Cans	133	
Cardboard	10,533	10,533
Glass	49	
Metals	216	
Newspaper	231	
Tires	1,126	1,126
Waste Oil	225	225
Wood and Sawdust	4,632	4,632
Miscellaneous ¹	1,852	1,681
Total	<u>18,772</u>	<u>18,197</u>

- ¹ Miscellaneous recyclables includes 6 acrylic sheets, 1560 tpy misbakes and misbatches from Alpha Beta, 121 tpy shrinkfilm and blow mold plastic, 169 tpy computer paper, and 2 tpy PET. Computer paper and PET are eliminated from this category in Column 3.

Data Sources: City of La Habra Recycling Survey, Public Services Department 1989

A summary of recycled materials and quantities is shown in Table 5-4, Waste Diversion through Recycling. The summary is a compilation of the data from Table 5-3 and 5-4. The quantities shown in Table 5-5 are the summation of quantities found in column 3 in each of the tables.

Table 5-5 Waste Diversion Through Recycling La Habra		
Recyclable Material	Amounts ¹ (tpy)	Amounts from Waste Diversion Study ¹ (tpy)
Aluminum Cans	294	168
Cardboard	10,533	3,548
Food Wastes	1,560	1,305
Glass, CRV	1,004	552
Glass, Other Containers	NR	4
Inert Solids	0	69,000
Metals, Ferrous/Tin Cans	30.5	229
Metals, Non-Ferrous	NR	253
Metals, Other	NR	195
Paper, Computer	22	0
Paper, High Grade Ledger	NR	468
Paper, Newspaper	1,297	709
Plastic, Film	121	79
Plastic, HDPE	14	42
Plastic, PET	67	30
Tires and Rubber	1,126	415
Waste Oil	225	0
Wood Waste	4,632	1,967 ²
Yard Waste	NR	502 ³
Total	<u>20,926</u>	<u>79,466</u>

1. Amounts shown to nearest whole number. Amounts from last columns of Table 5-3 and Table 5-4.
2. 1,716 tpy recycled or composted and 251 tpy incinerated.
3. 402 tpy recycled or composted and 100 tpy incinerated.

NR = Not Recorded or otherwise unavailable (proprietary)

It is estimated that 20,926 tpy is the actual level of waste diversion that occurs in the La Habra. Note that the Waste Diversion Study estimates recycling and composting at 79,466 tpy. The County's diversion tonnages include allocated amounts for recycling. The estimate for industrial diversion includes a large, allocated percentage of county-wide road materials recycling although no road wastes were recycled from La Habra in 1990. The waste asphalt and crushed rock were landfilled and the waste soil was used for fill material on the closed Vista Grande Landfill. Because La Habra is pursuing a pro-active approach to waste reduction, the City has determined that only 751 tons of the County allocated recycling quantities will be used for planning purposes. Therefore, the total quantity of recycled materials for 1990 has been set at 21,677 tons.

5.3.5 Planned Future Diversion

[18733.2, 18735.2 (a)(3)]

None of the existing programs will be decreased in scope according to responses received from those responsible for recycling activities. The following is a brief description of the potential increases in existing programs already planned by the responsible parties. None of the recycling programs developed in the SRRE are expected to reduce the scope of recycling provided by the existing programs.

Western Waste has expressed interest in expanding recycling capabilities in La Habra. Expansion would include collection of additional materials in the existing curbside program and initiating collection of recyclables in multi-family, commercial and industrial sectors of the city and of construction and demolition wastes. Western Waste has performed feasibility studies to address expansion alternatives. They have expressed willingness to pursue whatever programs the City directs them to develop. Western Waste has also expressed willingness to set up a biannual household hazardous waste collection day program.

Other recyclers in the City have plans for expanding services. Unicorn Metals Company has recently begun accepting glass. Glass beverage containers stamped for California redemption are purchased by them. Other glass containers are also accepted but not purchased. Unicorn Metals is currently performing feasibility studies to evaluate future expansion. No firm dates for expansion are set. Unicorn Metals has expressed interest in working with the City to promote public information and education on recycling.

U.S. Recycling Center has observed increases in citizen participation at their 1801 Whittier Avenue location as a result of increased awareness of redemption and scrap values. U.S. Recycling has indicated that potential expansion of their La Habra facility may occur if additional materials receive redemption values.

ENVIPCO California currently has no plans for expansion in La Habra.

5.4 Identification of Alternative Recycling Programs [18733.3, 18735.3 (c)(1), (2), (3), and (5)] For (4) see Section 5.6.3

Each city is to identify and evaluate program alternatives for residential, commercial, and industrial wastes. Based upon these requirements, the City of La Habra has evaluated ten types of programs. Note that most of programs include source separation methods to prevent degradation of materials by contamination with other materials, contact with putrescibles, and size reduction or breakage.

- Curbside Collection
- Multi-Family Residential (MFR) Collection
- Drop Off Centers
- Buy Back Locations
- Certified Recycling Centers
- City Agency Recycling
- Commercial and Industrial Recycling
- Manual MRFs
- Mechanized MRFs
- City Agency Procurement Policy

Program evaluations follow in Section 5.5. The evaluations are comparative and every program is evaluated according to the twelve criteria described in Appendix A. The criteria are assigned weighting factors because the criteria do not represent considerations of equal importance. The weighting factors are the same whether the programs that are evaluated are source reduction, recycling, or composting programs. The programs are assigned a rating of 1 through 10. One indicates a low rating and 10 indicates a high rating. The ratings are multiplied by the weighting factors assigned to the criteria to provide a relative ranking. A high ranking indicates high suitability for La Habra conditions in order to achieve the mandated goals. The program evaluations are shown in Tables 5-7 through 5-21 in Section 5.5. A summary of all programs evaluated is shown in Table 5-22.

City's Role: A description of each program is found in Sections 5.4.1 through 5.4.13. In each description, the role of the City is briefly addressed. In all programs, the City's role will include providing technical assistance and public information. In some programs such as unstaffed drop off centers operated by non-profit groups, the City's role will be limited to monitoring activities.

Emphasis will be placed on supporting and enhancing existing programs as much as feasible without compromising the City's objectives. Because existing programs already divert significant quantities, these activities will be supported. One way the City will consider providing support will be to examine modification of zoning and building codes to encourage recycling.

All of the programs consider a mix of public and private participation. In some programs, the role of the City is very extensive, such as a City-operated and staffed drop off center.

Other extensive programs target those portions of the residential, commercial, and/or industrial waste streams already regulated by the City. In these programs, the City may participate by modifying waste collection fees, waste handling ordinances and the waste collection franchise. The City does *not* consider it feasible to adjust the rate structure for service provided to single family residences (SFR) during the short-term planning period. A discussion of the SFR rate structure and its incompatibility with changes to encourage source reduction are found in Section 4.4.4 and Section 4.4.5.3. The same reasons apply for recycling.

5.4.1 Separated and Commingled Curb-Side Programs

In a curbside program, recyclable materials are source separated from other wastes. The recyclables may be commingled in one container or further separated by their material type into separate containers. The materials are collected separately, often in specialized trucks, at the curb-side, alley, or commercial facility. In a separated-type program, separated recyclable materials are ready for processing or marketing. In a commingled program, the commingled materials need further separation at a centralized facility. Because residents and businesses do not have to deliver the recyclable materials to a recycling center, the participation rate in these programs is usually higher than for programs focusing on drop-off, buy back, or certified recycling centers unless redemption or scrap values are dominant concerns.

City's Role: Because a curbside program is already in operation by the waste hauler, the role of the City and the program costs have been well-defined. The City would continue to direct the level of recycling performed by Western Waste and would administer the program in the same way it is currently being administered. This would apply whether the program were source separated or commingled.

In its current form, the program is source separated. In this alternative, it is likely that the City would continue to administer the program in the capacity already established. The cost of the program would continue to be paid for by the residents and reflected as a surcharge on garbage bills sent out by the City.

Although a source separated system is already in effect, both separated and commingled program alternatives will be examined.

SEPARATED CURB-SIDE PROGRAMS

Separated curb-side programs generally use a three-bin system: one for glass, one for metals, and one for plastic containers. Newspapers are usually tied and placed at the curb for collection. Special collection vehicles are used to collect the recyclable materials. There are many types of trucks and trailers that can be used for material collection but all have separate compartments for each material.

The advantage of a separated curb-side program is that recovery costs are reduced by having the residents source separate the materials. A disadvantage is that participation rates may be low due to the inconveniences placed on the residents: both separating the materials and carrying the three bins to the curb are time consuming. Lower participation rates lower the effectiveness of the program. A key to successful residential recycling is to make the program as convenient as possible. Separated curb-sided programs are also limited by the number of recyclable materials they can target from the waste stream, thereby limiting the overall effectiveness of the program.

Costs associated with purchasing a special collection vehicle or trailer are high. Trucks range from \$30,000 to \$150,000, and trailers range from \$5,000 to \$30,000. Bins costs for residents range from \$3.00 to \$15.00. Operating costs would include cost of labor, vehicle and bin, maintenance, and transportation costs to a recycling processing location.

COMMINGLED CURB-SIDE PROGRAMS

Commingled curb-side programs generally require only one container for collection of all the recyclable materials. Since the materials are not separated by type, special collection trucks or trailers are not required, rather, a standard refuse collection vehicle may be used. A standard refuse vehicle will also compact the recyclable materials, thus increasing the efficiency of collection. A typical collection container may be a standard garbage can or box that would be manually loaded onto the vehicle, or could be a wheeled container that is part of an automated refuse collection system. In automated systems, the containers are automatically picked up and loaded onto the vehicle and require less manual labor. The cost of standard cans is less than wheeled carts, yet requires more time for material collection.

An advantage of a commingled system is that participation rates may be higher since material recovery is more convenient for the resident. This is due to the time saved in separating the various materials and moving separate containers out to the curb. A wheeled cart/automated system would be the most convenient residential program while a standard box or can system would be slightly less convenient. Also, there are significant cost savings by not purchasing a special collection truck or trailer. The quantities and types of materials collected is significantly higher than in a separated curb-side program. A commingled curb-side program can target foam products, sheet plastics, mixed paper, and other more difficult recyclable materials.

A disadvantage is that recovery costs may be higher due to manual separation at a recycling center. Also, the use of standard refuse vehicles for recyclable material collection may require the materials to be collected on a different day than for regular refuse collection, or may require the purchase of additional refuse collection vehicles if the recycled materials are to be collected on the same day. Apparently there are no vehicles available that can collect both recyclable materials and regular refuse. A separate collection day for recyclable materials may increase the inconvenience to the resident and lower the participation rates. The most convenient system is one that is automated or semi-automated and can collect both the recyclable materials and regular refuse on the same day. It is also important that the frequency of collection of recyclable materials is often. Weekly collection on regular garbage days in other programs has yielded the highest participation rates.

5.4.2 Multi-Family Residential Recycling Programs

Apartment buildings and condominium complexes generate large quantities of recyclable materials that are concentrated in small areas. Multi-family residential recycling programs may be implemented in the same manner as single family residential curb-side programs but apartments and condominiums usually have limited space for storing the separated recyclable materials. To make a recycling program convenient, centralized storage areas will need to be developed. Also future building codes may be changed to require new buildings to provide storage space for separated recyclable materials.

There are two general methods for collecting recyclables from multi-family residences (MFRs): collecting from a centralized commingled bin located in the complex; or collecting separated materials from multiple bins. A third method would be collection from each residence. This method is costly, inefficient, and is not compatible with the existing collection system and technology. For this reason, it will not be pursued.

City's Role: Separated materials and commingled materials collection from a centralized location would likely be administered by the waste hauler who presently administers the solid waste collection from MFRs. The City would continue to provide direction to the waste hauler and would perform new tasks such as providing public education to tenants, property owners, and property managers; reviewing and revising waste ordinances to address recycling conditions; and assisting the waste hauler to overcome institutional barriers and other obstacles to program implementation.

CENTRALIZED COMMINGLED COLLECTION

This is the most common type of collection used in California. Centralized collection is more efficient than individual curb-side collection because refuse is concentrated in large bins and the collection vehicles are usually automated so collection time and manual labor are limited. Establishment of a multi-family dwelling recycling program would require the placement of additional bins for the collection of recyclable materials. Also, each resident would need to have separate containers within their unit: one for the recyclable materials and one for regular refuse. To make this type of system most efficient, the program would use a commingled centralized collection bin rather than separate bins for each commodity. This would reduce the number of trucks needed to collect the materials and increase the types and quantities of materials collected.

If the complex consists of rental units, it is likely that the owner of the complex pays for the refuse collection and does not directly charge the renters. Because of this, monitoring and enforcing participation in this type of program may be difficult. This may result in lower participation rates and recovery rates.

If the complex consists of owned units, it is likely that each owner pays an association for refuse collection or pays the waste hauler directly. Because the owners have the responsibility for their refuse collection, it would be easier to establish incentives or fines to increase participation in the program. However, monitoring of participation may still be difficult. This may also result in lower participation rates and recovery rates.

CENTRALIZED SOURCE SEPARATED COLLECTION

A source separated program would require several bins or carts to accommodate various recyclable materials at a centralized location. A source separated program would require greater diligence by the residents to prevent contamination. The system is more complicated than the commingled system which indicates a tendency toward lower participation rates. If several bins or containers result in the loss of parking space or other valuable space, resistance may be met by property managers and owners. A source separated program would require less labor and equipment by the waste hauler for sorting materials.

5.4.3 Drop-Off Recycling Programs

Drop-off programs require residents and businesses to source separate recyclable materials and deliver them to specified drop-off collection centers. Drop-off centers may range from unstaffed, single material collection points to fully staffed, multi-material collection centers. Participation rates are generally low because residents and businesses are responsible for separating and delivering the materials and no payment is received for the materials. Drop-off programs also require residents and businesses to store the materials until delivered. This can pose problems if storage space is limited. To enhance the success of these programs, drop-off centers need to be located as conveniently as possible. Mobile collection bins that can be rotated among several locations is a variation of this program.

Many of the centers are operated by non-profit groups. Collected materials are sold to recyclers and scrap dealers and the income is earned by the non-profit groups. Much of the participation in drop-off programs is a result of the desire to assist these groups.

UNSTAFFED DROP-OFF CENTERS

Unstaffed drop-off programs are the least expensive recycling programs available to the City and may consist of one to several colored bins, each labeled with a material type, and placed in a well traveled area. Common containers used today are blue wooden boxes, for newspapers, metal bins, and the dome-shaped bins called "Igloos". Bins that can be emptied on site reduce servicing and travel costs. Drop-off centers can be owned by the City or privately owned. Currently, there are several privately owned drop-off bins located within the City of La Habra; these are operated by churches, schools, and other non-profit groups. A disadvantage to unstaffed drop-off centers is that they may be subject to vandalism, illegal dumping, and theft from scavengers.

City's Role: Rather than compete with non-profit groups for the collection of recyclable materials, the City would promote this program alternative by providing assistance to groups interested in operating drop off centers. Assistance could be educational, such as how to establish a program, define the costs, promote public participation, and identify the markets. Assistance may also be economic such as providing grants and loan guarantees. Other economic help may be provided by the City to assist these groups to obtain bins donated by the waste hauler or certified recyclers. Economic incentives could be on a condition that the groups provide diversion quantities to the City.

Baseline data for drop off centers is currently unrecorded. The first task the City would perform would be to collect information on the number of drop off centers, who runs them, what materials are collected, how much is collected, and where the materials are sent. From this information, steps to achieve the short- and medium-term objectives will be formulated.

One objective for promoting drop off centers is to increase diversion through other means besides the primary recycling programs, i.e. curbside collection and materials recovery facilities. Materials diverted through drop off centers are commonly sold to certified recycling centers. For this reason, the drop off program and certified recycling center program should be viewed as interrelated. On this basis, targeted diversion quantities shown in Table 5-12 have been combined for drop off centers and certified recycling centers.

FULLY STAFFED DROP-OFF CENTERS

Fully staffed drop-off centers are more expensive to implement since they require laborers to operate the facility. The laborers may help residents unload recyclables from their vehicles and sort the materials. Vandalism, illegal dumping, and theft are significantly reduced at staffed centers. Participation rates may be higher than for unstaffed centers since residents can obtain help and service. A disadvantage to the center may be limited hours if the center is open only when an employee is present. This may reduce participation rates, especially if the facility closes early.

Fully staffed drop-off centers may be owned by the City or privately owned. However, for the purpose of this evaluation, only publicly owned centers are considered. No privately owned drop off centers are currently operating in the La Habra and none are expected to open. This is because drop off centers do not offer payment for materials and would not be able to compete for profit with existing recycling programs.

City's Role: A City operated and staffed drop off center would require allocation of land, funds, and equipment. The center would likely be operated through the Public Services Department. At least two laborers would be needed to assist the public, remove litter, remove contamination from the materials, sort, store and transfer the materials, and maintain records.

5.4.4 Buy Back Recycling Programs

Buy back centers are similar to drop-off centers, except that residents and businesses are paid for their recyclable materials directly per pound for each container. This creates a financial incentive to recycle materials and increases public participation. Buy back centers in the State of California purchase California Redemption Value (CRV) beverage containers and are located at sites where the beverages may be purchased. The CRV materials include aluminum and bimetal cans and glass and PET beverage containers. Like drop off centers, buy back centers should also be conveniently located to enhance public participation.

Establishing a buy back center at a grocery store is a long a tedious process. The store must first establish itself as a convenience zone. To become a convenience zone, the store must subscribe to the progressive grocers guide, sell over 117 different items including produce, and acquire over \$2 million per year in sales. Then the store must complete an approval process with the California Department of Conservation, which can take up to three years.

City's Role: There is little the City can do to speed up the approval process or force stores to become certified, but the City can encourage large established grocery stores to complete the certification process. Grocery stores are often reluctant to become a convenience zone because of the costs associated with completing the approval process and the establishment of the buy back center. One approach the City may take would be to publicly recognize participating merchants with plaques, public announcements, and public ceremonies.

Buy back centers rely on individual motivation which cannot be controlled by the City. However, the City may enhance public participation by educating the public on buyback locations and how to use them, such as providing instructions on how to use reverse vending machines.

5.4.5 Certified Recycling Centers

Certified recycling centers are certified by the State of California to buy back beverage containers and collect the State Redemption Value per container. Certified centers are similar to grocery stores, except they pay an additional scrap value for materials and may be located anywhere, such as in industrial zones. Establishing a certified recycling center requires completing a permitting process with the California Department of Conservation. The process can take several years.

The added scrap value provides a greater incentive for people to recycle their high value materials, such as aluminum cans. Certified centers also buy back other materials, such as cardboard, paper, and non-CRV glass, thus increasing their recovery rates over grocery stores that collect only CRV materials.

City's Role: Several options exist for city involvement to promote recycling through certified recycling centers. The City may assist in the permitting process to support the establishment of more centers. The City may also provide variances to identified fees or permitting requirements to encourage certified recyclers to expand their operations. Technical assistance may be provided to identify loans and grants and to provide loan guarantees for facility establishment or expansion. Public educational assistance may be provided to the centers by providing information to the public on certified center locations, telephone numbers, business hours, materials accepted, and general information on how to keep materials uncontaminated. The City may assist non-profit groups that operate drop off centers to become aware of certified recyclers in La Habra that will purchase their recyclables. Together, certified recyclers, the City, and the waste hauler may develop special event, school, and business association programs to promote recycling. In return for City assistance, the City would require certified recyclers to report their diversion quantities to the City.

5.4.6 City Agency Recycling Programs

City's Role: By adopting an internal, department-wide recycling program, the City would set an example for others to follow. For example, the City produces significant quantities of waste paper: high grade white and colored paper, "mixed paper" (unsorted paper of mixed quality), and high grade computer paper. An expanded version of the City office paper recycling program could be used as a case study for private sector offices to follow.

Other recycling programs would be implemented in City offices and other City locations. These programs would focus on collecting beverage containers and newspapers. Successful implementation by the City of multi-material recycling could be used as a role model for recycling at industrial and commercial sites.

The first step the City would need to perform would be to establish baseline information, such as how much waste is generated by City sources and what materials the waste is composed of. Using this data, a plan may be formulated that will achieve the recycling objectives.

CITY OFFICE PAPER RECYCLING PROGRAM

Offices typically generate large quantities of high-grade and mixed quality paper. To recover the high grade white paper, the City of La Habra has established office paper recycling programs at City offices. The City has placed paper collection boxes and bins at each office. Small paper containers placed at each desk and work station, allow employees to source separate the high grade of paper. Large, centralized paper containers are placed where the employees can empty their small containers when full. As the centralized containers become filled, they would be taken to large bins outside for collection. The City would continue to develop this program by adding other grades of paper to the program, such as colored paper and mixed paper.

Since the paper is collected from centralized locations, collection efficiency would be enhanced while collection time and manual labor would be minimized. However, enforcement of monitoring and participation may be difficult. To encourage participation, the City may offer financial incentives such as lowered rates for regular refuse collection or recognition of offices with highest participation. Eventually, mandatory recycling may be evaluated.

OTHER CITY RECYCLING PROGRAMS

In addition to paper recycling which would occur primarily at offices, recycling activities may be implemented at other City agency locations, such as at maintenance yards. In particular, beverage containers and newspapers would be recycled. Several alternatives are available for consideration in this program. In particular, collection and sale of materials by employees for employee amenities would likely promote high participation rates. Contests between different departments may also be designed to promote recycling where the benefits would be donated to a non-profit group.

5.4.7 Commercial and Industrial Recycling Programs

Commercial and industrial recycling programs are twofold: one program aspect would be similar to residential curb-side programs in that businesses and industries would separate their recyclable materials for collection by the waste hauler. The other aspect would be to educate the business sector to identify ways which they could develop their own recycling programs that may economically benefit their business.

Because of the expected quantities, recyclables would likely be stored in large containers such as bins, rather than small boxes or garbage cans. Materials commonly collected in these programs are high-grade white paper, corrugated cardboard, high grade colored paper, newspaper, aluminum cans, glass containers, ferrous and nonferrous scrap metals, wood wastes, and a variety of plastics. Commercial and industrial recycling programs may target office buildings, light and heavy industries, restaurants, schools (if not covered in the preceding City program), supermarkets, and other retail stores.

City's Role: Although the recycling services for the commercial and industrial sectors would likely be performed by the waste hauler, the City would be closely involved in the strategic development and direction of the program. To encourage high participation rates, the City would work with the businesses to perform waste evaluations, targeting large generators first. In the waste evaluation, materials and quantities would be identified for diversion. It is likely that the waste evaluation would be mandatory. Each company would be required to participate in a waste evaluation (also discussed in Section 4) and develop a waste reduction plan (Section 4) that identifies recycling levels. Based on the audit and plan, recycling activities would be identified and implemented. This type of program is particularly well-suited to waste generators whose waste costs are directly proportional to the amount of waste produced. In La Habra, most commercial and industrial waste generators pay for service with a direct cost per bin charge. The City and waste hauler would assist the business to locate a suitable location onsite for storage and collection of recyclables and to develop a collection schedule.

Public information would also be a large part of the City's involvement in this program. Through presentations to business associations and employees, the City would show business leaders and employees how recycling should be performed and indicate to them ways that recycling may be able to reduce their costs.

OFFICE PAPER RECYCLING PROGRAMS

Offices typically generate large quantities of paper: high-grade and mixed. To recover these materials, the City of La Habra would encourage office paper recycling programs. The businesses would need to have additional refuse bins placed at offices for the collection of the paper. The City would encourage the use of small paper containers placed at each desk and work station where employees could source separate different grades of paper (color, etc.). Large, centralized paper containers would also be needed in the offices where

the employees can empty their small containers when full. As the centralized containers become filled, they would be taken to the large refuse bins outside for collection. The City would assist office managers, property managers, janitorial services, the waste hauler, and others to develop a workable collection system.

Since the paper will be collected from centralized locations, collection efficiency should increase while collection time and manual labor should decrease. However, monitoring and participation enforcement may be difficult. To encourage participation, the City could offer financial incentives, such as lowered rates for regular refuse collection or awards for high participation.

COMMERCIAL AND INDUSTRIAL RECYCLING PROGRAMS

While several industrial and commercial recycling activities have been in operation for quite some time, significant increases in recycling can occur through well-developed programs targeting these waste generators. Program development would coincide with related public education activities described in Section 9 of the SRRE. Separated materials would need to be stored onsite until collected by a commercial recycler or waste hauler. Note that some scrap dealers and certified recyclers have sizeable commercial accounts and perform this activity in a regular and reliable manner. The City may encourage free enterprise by continuing to allow each industry to select their own recycler at a competitive price.

Other methods of recycling beside source separation and commercial collection would be considered as part of this program. For example, this may include on site drop-off boxes with a means to quantify the amounts collected.

5.4.8 Material Recovery Facilities (MRFs)

A material recovery facility (MRF) is a centralized facility that receives, separates, processes, and markets solid waste components. A MRF can be operated in conjunction with other recycling programs, such as a commingled curb-side collection program or operated without any prior sorting of the waste. For unsorted waste streams such as the multi-family residential waste stream of La Habra, a MRF provides for 100% participation by waste generators without requiring changes to habits or containers. The primary advantage of a MRF is that recyclable materials from a whole city may be pooled and

processed uniformly. This will become increasingly important as buyer specifications become more stringent. A disadvantage to a MRF is that no educational value is associated with this system. The public is not made aware of the value of components of the waste stream or the need to conserve resources or landfill space.

City's Role: Developing a program that utilizes a manual or mechanical MRF would require administrative resources for contract administration among the City, the waste hauler, and the MRF operator. The cost to dispose of unsorted solid waste at a MRF may be 50 to 100% higher than to dispose of the waste at Olinda Landfill. Waste collection fees would need to be adjusted to cover the increased costs. An aggressive public information campaign would be an essential element for diversion of the waste stream to a MRF. The campaign would emphasize the importance of recycling, the need to conserve landfill space, and the reasons why recycling will cost more instead of costing less than disposal. The City may direct the waste hauler to recycle only a portion of the waste stream through a MRF. For example, one of the most difficult waste generation categories to develop curbside programs for is multi-family residential. Multi-family residential may be a candidate sector of the waste generators for pilot scale implementation of a MRF program.

A contingency MRF program would be to support the development of a nearby MRF facility. This option would likely be explored in collaboration with other cities and with the waste hauler or other group that would operate the facility. In this option, funding the facility may be shared by the cities, the County, the State, and the operators. Advantages to this option would be shared support for siting and permitting the facility and shared input into the fee schedule.

MANUAL MATERIALS RECOVERY FACILITY

Manual material recovery facilities require labor to hand separate the recyclable materials. A common layout for a manual facility is one or more sorting lines with hand picking stations along each side. Each station collects a different type of material and deposits the materials into bins located under the station. The line usually consists of an elevated conveyor belt where unsorted refuse is loaded onto the conveyor belt from one end. Refuse that comes off the end of the conveyor belt can be re-routed through the sorting line several times to increase material recovery.

MECHANIZED MATERIALS RECOVERY FACILITY

Mechanized material recovery facilities (MRFs) are similar to manual ones, except that much of the material separating is done by machines. This reduces the potential worker health risks from hand sorting municipal waste.

A common layout for a mechanized facility is the use of multiple parallel sorting lines. Unsorted refuse is loaded into a rotating horizontal trommel. The trommel has graded holes in its side that sort the refuse by size. The sorted refuse spills onto one of multiple parallel conveyor belts. Overhead magnets then remove the ferrous metals. Aluminum can be detected by ionic meter devices that activate hydraulic air blowers to remove the aluminum from the sorting line. Paper can also be removed by air blowers placed under the conveyor belts. Optical sensors may detect and remove different types of glass by color. Other machines available on the market can remove and sort other materials. The capital costs for the equipment is very high.

At the end of the sorting lines, materials that are not removed by machines must be hand picked. However, mechanized facilities greatly reduce the need for manual labor while increasing material recovery quantities.

5.4.9 Salvage at Solid Waste Facilities

Once taken to a transfer station or landfill, waste generated within the City of La Habra can be salvaged for recyclable materials. Traditionally, this type of program is not designed for thorough sorting of municipal waste. Salvaging typically focuses on large items with resale value such as corrugated cardboard, construction and demolition wastes and white goods. Salvaging may be viewed as a valuable final opportunity to glean materials from the waste stream, especially from wastes disposed of directly by homeowners and private haulers. Although salvaging has been ongoing for decades and even centuries, salvaging does not currently have a significant impact on recycling percentages.

City's Role: Participation by the City in a program to enhance the salvaging activities at the landfill would involve multi-jurisdictional or County-wide cooperation. As part of the program, salvaging operations would be analyzed to determine how they could become more effective. The region- or county-wide agencies would develop objectives for increased recycling at the landfill by salvaging.

5.4.10 City Procurement Policy

In order for the City to assume a leadership role in recycling, an examination of its purchasing policies and programs is necessary. Although not a recycling program, the City purchasing policies need to be examined to ensure not only the nondiscriminatory purchasing practices as discussed within Section 4 Source Reduction, but a pro-active recycled products purchasing policy. The City of La Habra is one of the largest consumers of paper, paints, motor oil, and other products that are often made from recycled commodities. Therefore, the City needs to examine its purchasing policies to specify minimum recycled content wherever feasible to assist in the recycled material market stimulation.

5.5 Evaluation of Alternative Recycling Programs [18733.2, 18734.2 (a)(1), (2), (3), (4), (5), (6) and (b)(1), (2), (3), (4)]

The evaluation criteria described in Appendix A were used to rate the programs described in the preceding sections. In the following twelve sections, twelve criteria are used to evaluate how well the programs would meet waste reduction mandates, given the conditions that make La Habra unique. Section 5.5.13 contains a series of tables which quantitatively summarize the evaluation presented below. An explanation of the quantitative analysis is also included in Section 5.5.13.

5.5.1 Waste Reduction Effectiveness

The programs described in the Section 5.4 vary considerably in their effectiveness to divert solid waste from landfills. The most effective programs appear to be material recovery facilities, whether manual, mechanized, or a combination of both. MRFs are rated 9 for manual and 10 for mechanized because waste from all generators can be processed through the facility with no inconvenience to the generators. The Commercial and Industrial Recycling program is also rated 10 because as a mandatory program the generators are committed to evaluate their waste streams, develop a waste plan with recycling goals, and perform recycling. Although a significant portion of this waste stream is already diverted, the amount of recycling that potentially may be performed is sizeable.

Programs rated 7 or 8 are expected to produce a moderately large amount of recycling. The programs received this evaluation based on the limited number of materials that would be collected in these programs. These programs include all residential programs and the commercial and industrial office paper program. Commingled residential programs are rated 8 and materials separated programs are rated 7. The office paper program was rated 8 because recyclers are anticipated to encourage this program since high grade paper produces a better revenue.

The buy back program was rated 5 because of the limited materials that are recycled; CRV beverage containers only. Staffed and unstaffed drop-off centers were evaluated 4 and 3 respectively because of the inconvenience associated with this system, the lack of income to the public for their efforts, and the limited number of materials collected at the centers, often only newspaper.

City agency programs were rated 3 and 2 because of the low volume of materials expected to be recycled through this program. These ratings do not reflect the important role model and educational values these programs offer. Salvaging was rated 1 because of the very low volume of materials that would be diverted through this program which could be identified as originating in La Habra.

5.5.2 Total Costs

Recycling program costs were evaluated on a comparative basis only. The cost evaluation does not take into account the funding mechanisms for each alternative. A cost comparison is provided in Table 5-6 for typical cost ranges for curbside, multifamily, and commercial/industrial recycling equipment. The most expensive alternatives are typically MRFs, manual or mechanized: MRFs for an individual city would typically receive a low rating of 1 for mechanized and 2 for manual. However, this assumes the City would be required to build and operate the MRFs. Since two private mechanized MRFs are operating in a close proximity to the City of La Habra, the costs to the city are reduced to contract negotiations and monitoring. Therefore, the mechanized material recovery program has a low implementation cost of 7, while the manual material recovery program has a high cost because it would need to be sited, constructed, and potentially operated by the city.

The first part of the report is a general introduction to the project. It describes the purpose of the study, the objectives, and the scope of the work. The second part of the report is a detailed description of the methodology used in the study. This includes a discussion of the data sources, the data collection methods, and the data analysis techniques. The third part of the report is a discussion of the results of the study. This includes a presentation of the data, a discussion of the findings, and a comparison of the results with the objectives of the study. The fourth part of the report is a conclusion and a list of references.

Of the residential programs, the commingled multi-family program was rated lowest at 3 because of the potential need for an additional vehicle and a processing site for separating the materials. Administrative costs are expected to be high because of the difficulty in working out locations for the storage of materials at multifamily residences and developing the cooperation of tenants. The multi-family source separated program was also rated 3 because the program would likely have lower participation rates and higher contamination problems. The curbside commingled program was rated 6 because collection vehicles are already in place on a curbside program but a processing facility would still be required. The source separated program was rated 7 because most of the start up costs have been dealt with already.

Because the commercial and industrial program would be mandatory they would require continuous City involvement with associated costs. The program would require additional bins for storage of materials and an additional collection vehicle. This program is rated 4. The commercial and industrial office paper program is rated higher at 5 because it is anticipated that recyclers will assist the City to implement this program assuming the market for the material remains steady. If high grade paper is also collected by the waste hauler, an analysis would need to be performed to estimate the additional costs this would produce, such as another vehicle.

The staffed drop off center program is rated 6 based on the cost of operating the center. The center would require at least two laborers, heavy equipment, and possibly transportation vehicles. However, these costs would be somewhat offset by the income derived from the materials. At a drop off center, the materials would not be purchased, simply accepted for waste reduction purposes. However, because of the lack of income to the public, it is unlikely that very large quantities of recyclables would be received to offset costs.

The City agency programs would likely be implemented for moderately low costs which may be reduced even further if City employees will volunteer to help set them up. These programs are rated 8.

The buy back alternative is rated 8 because the City's involvement would be primarily as a liaison between buy back operators and retail stores. Salvaging is also rated 8 because the cost of enhancing salvaging operations at the landfill would be shared on a county or region wide basis.

The least cost programs are unstaffed drop off centers and certified recycling centers. Unstaffed drop off centers are rated 9 because the primary costs would be associated with public education and technical assistance. Actual drop off centers would be operated by non-profit groups or certified recyclers.

Programs rated 7 or 8 are expected to produce a moderately large amount of recycling. The programs received this evaluation based on the limited number of materials that would be collected in these programs. These programs include all residential programs and the commercial and industrial office paper program. Commingled residential programs are rated 8 and materials separated programs are rated 7. The office paper program was rated 8 because recyclers are anticipated to encourage this program since high grade paper produces a better revenue.

The buy back program was rated 5 because of the limited materials that are recycled; CRV beverage containers only. Staffed and unstaffed drop-off centers were evaluated 4 and 3 respectively because of the inconvenience associated with this system, the lack of income to the public for their efforts, and the limited number of materials collected at the centers, often only newspaper.

City agency programs were rated 3 and 2 because of the low volume of materials expected to be recycled through this program. These ratings do not reflect the important role model and educational values these programs offer. Salvaging was rated 1 because of the very low volume of materials that would be diverted through this program which could be identified as originating in La Habra.

5.5.2 Total Costs

Recycling program costs were evaluated on a comparative basis only. The cost evaluation does not take into account the funding mechanisms for each alternative. A cost comparison is provided in Table 5-6 for typical cost ranges for curbside, multifamily, and commercial/industrial recycling equipment. The most expensive alternatives are typically MRFs, manual or mechanized: MRFs for an individual city would typically receive a low rating of 1 for mechanized and 2 for manual. However, this assumes the City would be required to build and operate the MRFs. Since two private mechanized MRFs are operating in a close proximity to the City of La Habra, the costs to the city are reduced to contract negotiations and monitoring. Therefore, the mechanized material recovery program has a low implementation cost of 7, while the manual material recovery program has a high cost because it would need to be sited, constructed, and potentially operated by the city.

5.5.3 Potential Institutional Barriers

Institutional barriers may include previously established waste stream ownership agreements, long-term franchise contracts over which the city has no control, lack of city authority to implement a program, and existing physical restrictions on space such as at apartment buildings and commercial sites. The need for special permits or local, state or national approvals from various regulatory agencies are not significant concerns for recycling programs. With few exceptions, the recycling programs were rated from 8 to 10. MRF programs were both rated 8 assuming that no new MRF facilities would be required to meet the needs of La Habra. If new facilities were required, permitting of these facilities would be shared with the State which could create institutional barriers. There are currently no parties actively seeking to build a MRF to serve La Habra's waste stream.

Institutional barriers that may affect certified recycling centers are land use constraints and opposition by neighbors. Certified recycling centers are rated 6.

Multi-family residential programs are rated 5 because the concern for providing parking spaces to tenants is coupled with an issue of maintenance of several recycling containers in addition to the garbage bin.

The buy back program is rated 5 because many retail stores do not want to handle buy back operations and will resist establishing a center at their store. The City may not have authority to impose expansion of the buy back program.

5.5.4 Consistency with Local Plans, Policies, and Ordinances

The recycling programs are not expected to produce significant conflicts with local plans, policies, and ordinances. Some of the programs will require review of ordinances pertaining to sanitation requirements, such as unstaffed drop off centers for beverage containers. All of the programs were rated from 8 to 10 except the commercial and industrial recycling program.

The commercial and industrial recycling will need to be examined in light of interpretation by the City of wastes that shall be hauled by the City-contracted waste hauler versus pick up of materials by independent recyclers. The mandatory aspect of the program will also need to be examined with respect to existing ordinances regulating businesses. This program has been rated 6.

Table 5-6

Table 5-6 RECYCLING EQUIPMENT CAPITAL COSTS

Equipment	Curbside Costs	Multi-Unit Costs	Commercial and Industrial Costs
Roll-Off Containers		\$2k - \$4K	\$2k - \$4K
Wheeled Containers	\$30 - \$100	\$30 - \$100	
Single Containers	\$2 - \$20	\$2 - \$20	
Multi-Containers (Stacking)	\$15 - \$40	\$15 - \$40	
Open Top Trucks	\$30k - \$70k	\$30k - \$70k	\$30k - \$70k
Closed Body Trucks	\$50k - \$80k	\$50k - \$80k	\$50k - \$80k
Trailers	\$6k - \$30k	\$6k - \$30k	

Sources: Biocycle 1989 & A-1 Prod. Inc.

5.5.6 Availability of Markets

Because markets fluctuate and may improve or decline dramatically while the recycled products trade is being established, recycling programs have been rated to reflect their susceptibility to fluctuations. The programs have also been rated to reflect the number of markets for a material. Salvaging was given the highest rating (10) because this low level enterprise is easily adapted to changing markets. Salvaging typically is a low overhead business with few restraints to changing the focus of the work.

Programs that are targeted for collection of CRV beverage containers such as the City recycling program and the buy back program are rated 9. It is assumed that as long as a redemption value is a driving force for recycling, these programs will remain stable.

Programs that are rated 8 are those which appear to target items with relatively stable markets. These programs are the City office paper program, the commercial and industrial office paper program, and the commercial and industrial recycling program. Two of these programs target high grade office paper. Although the price for high grade paper may drop as a result of increased collection, the demand for recycled paper is increasing quickly. The best post-consumer feedstock for this product is high grade paper. High grade paper has other uses also which make it more flexible than other paper products such as newspaper and magazines. The main stabilizing factor for the industrial program is the cardboard. Cardboard has been recycled in large quantities for some time without a sharp drop in prices. Cardboard is expected to remain in high demand.

MRFs are rated 7 for manual and 6 for mechanized because the cost of operating a MRF makes the enterprise sensitive to fluctuations in market values.

Recycling systems which are cumbersome to alter because they require public re-education are more susceptible to market fluctuations. For this reason, all of the residential programs and the drop off programs were rated lower. All were rated 6 except unstaffed drop off centers were rated 4 because these were likely to remain volunteer efforts with the sale of materials benefitting non-profit groups. If insufficient revenue is derived from the efforts, the drop off centers are more likely to close. This is not as likely for a staffed drop off center because it would be operated by the City for the purpose of achieving the recycling mandates, not for profit.

5.5.5 New or Expanded System Requirements

Programs were rated depending on the amount of needed expansion or changes to the existing facilities, the need for increased staffing, or additional equipment. For example, commingled residential collections would require a processing facility.

Developing programs that augment recycling activities that are already established will not create a significant need for additional resources. Programs that will likely be compatible are the separated curbside program, the unstaffed drop off centers, the City office paper program, and salvaging. All these programs are rated 10.

The buy back program was rated 8 because the program has been proven to fit in with existing retail conditions with only moderate modifications required at the site. Although commercial and industrial recycling are already occurring, the program that addresses this sector will require participation by businesses that are not currently recycling. For this reason, the commercial and industrial recycling program was rated 7. Certified recycling centers are rated 7 because it is likely that expanded facilities will be necessary to increase rates through them.

Both multi-family programs were rated 5 because they would generally follow the system that is already established for curbside recycling but would still increase the requirements of equipment and laborers. Modifications would be required by the waste hauler and by the property owners, managers, and tenants. Staffed drop off centers were rated 4 because no infrastructure is in place to start up a staffed drop off center. Such a center would likely require a site, large and small bins, trucks, forklifts, attendants, and an office trailer.

The MRFs are incompatible with the existing waste collection system and the system of extensive participation by certified recyclers and others who maintain industrial and commercial accounts. However, if existing MRFs are used, then no new facility requirements would be required. For this reason, they are rated 7.

industrial programs. The buy back program was rated 9 because the program is somewhat inconvenient since beverage containers must be collected and transported by the public to buy back centers. The inconvenience is somewhat offset by the monetary reward received for the efforts.

All other programs are rated 7 or 8 except for the drop centers. While some inconvenience is required in each of the programs, similar programs in other municipalities have shown that participation rates increase as new habits become accepted.

The drop off centers are rated 6 for staffed and 5 for unstaffed because the generator is required to collect, store, and haul the materials to the drop off center without receiving monetary reward for the efforts.

5.5.9 Acceptability by the Private Sector

The majority of the recycling programs are rated 10 for acceptability by the private sector because the programs do not impact their activities directly. Five programs which are directed towards the public sector were rated lower. The City programs are rated 7 for office paper and 8 for other City recycling programs. They will require changes in office and other operations and may be perceived as a negative impact on the existing system. The buy back program is rated 7. Support by the City to increase the number of buy back centers may provoke opposition from the stores that would be targeted for involvement.

The two least popular programs with the private sector would likely be the office paper and the commercial and industrial programs. These programs are designed to affect nearly all businesses in La Habra. The office paper program would not be as much of an imposition although there is a concern for the space needed by paper storage bins inside an office. Another problem may be the collection of the paper. If the paper is not collected by a reliable party in a routine and timely manner, the program will fail. This program is rated 5. The commercial and industrial recycling program is a demanding program and has been designed for mandatory participation by businesses. Time is required to develop waste plans and participate in waste evaluations. Employees' job descriptions may need to be revised to include recycling duties. For some businesses, recycling programs may cost more than they earn because of the labor involved. This program is rated 4 for acceptability by the private sector.

5.5.7 Early Implementability

The majority of the recycling programs have been rated 6 or 7 because most programs would require additional equipment, development of a personnel structure, or arrangement of materials storage locations in order to expand to meet new recycling goals.

Programs which are already in place have been rated 10 for early implementability. These programs are the materials separated curbside program and City office paper recycling.

Although commercial and industrial recycling are already well underway, several elements of the program have not been addressed and will require some lead time to implement. For this reason, the program is rated 8. Also rated 8 is the City agency recycling program because it will require some lead time to organize and to solicit commitments from employees to organize and operate decentralized programs. An assessment will need to be made whether the City would assist by providing transportation of recyclables to certified recycling centers.

The multi-family separated materials program is rated 7 because the program administration and management would likely be similar to the existing curbside program. Lead time would be required to educate residents of the upcoming service and to arrange location of the recycling bins, but the program appears to be implementable in the near future. The commingled programs were rated 4 because insufficient processing facilities exist to handle the materials.

By utilizing existing MRF facilities, the mechanized MRF program would be able to start quickly. The manual program would not be feasible. The mechanized MRF program was rated 9 and the manual program 2. The planning, siting, permitting and funding activities that would initially occur for a new MRF facility would likely produce a long lead time before construction. If the existing mechanized MRFs cannot not be used, this alternative would be infeasible for the short term.

5.5.8 Acceptability by the Public Sector

Acceptability by the public sector is largely dependent on the convenience and the perceived impact of a recycling program. Programs with no impact or reduction in convenience were rated 10. These include the MRF, salvaging, and commercial and

5.5.13 Summary of the Evaluation

The following Tables 5-7 through 5-21 summarize the evaluations received in the preceding discussion. Each program was rated according to the identified criteria which are discussed in Appendix A. The weighting factors assigned to the criteria are also in the Appendix. The ratings are multiplied by the weighting factors to produce a weighted rating or ranking.

In Table 5-22, the numerical rating are summarized and the programs are listed in order from highest to lowest ranking.

5.5.10 Potential Environmental Impacts

The recycling programs were evaluated for adverse changes in environmental effects. Nearly all the programs would produce no change and are rated 5. Programs with a potential for detrimental effects would need to be evaluated further to determine if adverse effects are a concern. These programs include the commingled curbside and both multi-family programs (noise, litter, traffic and odor effects of a sorting station), the staffed drop off center and certified recycling center (noise, litter, and traffic), City recycling programs (safety hazards), and the commercial and industrial program (noise, odors, litter, and safety hazards). These programs were rated 4.

5.5.11 System Flexibility

Only one program was rated highly flexible; the manual MRF. Even the mechanized MRF is more constrained than the manual system which may be converted to handle a variety of materials and items with minimal difficulty. The manual MRF was rated 10 and the mechanized MRF was rated 9. Residential programs, buy backs, certified recycling centers and staffed drop off centers were rated 7 or 8 because there is some flexibility to expand and include additional materials. Inflexibility increases with the reduction in the number of materials collected. On that basis, unstaffed drop off centers and office paper programs appear to be considerably less flexible and were rated 4 or 5. Salvaging was rated 5 because salvaging is dependent on large, bulky items such as white goods and cardboard. Also salvaging is dependent on the arrival of recyclable materials and products to the landfill. Both of these factors may prove to be limited as more of the salvageable items are diverted earlier from the waste stream or may drop in resale value. The City recycling and commercial and industrial recycling are rated 7 because they are only moderately flexible in response to market fluctuations and other influences.

5.5.12 Changes in Waste Type Generation or Use

Nearly all the recycling programs were rated 5 which indicates that no change in waste type generation or use is expected. Exceptions to this are programs which may have some positive effect on waste type generation as a result of the financial impact of recycling or the heightened awareness of the amount of waste that is being generated. This does not infer that some negative changes to waste type generation or use will not occur. No negative changes have been identified at this time.

Programs that are expected to have some positive effect are the City office paper program, and the commercial and industrial office paper and other recycling programs.

TABLE 5-8
RECYCLING COMPONENT
PROGRAM EVALUATION
City of La Habra

Centralized Commingled Collection - Multifamily

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	8	22	176
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	8	2	16
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	4	7	28
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	5	4	20
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	3	28	84
Availability of Markets	Very Limited		Moderately Limited		Readily Available	6	12	72
Total						78	100	593

TABLE 5-7
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

SFR – Separated Curbside Collection

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	7	22	154
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	10	4	40
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	7	28	196
Availability of Markets	Very Limited		Moderately Limited		Readily Available	6	12	72
Total						94	100	751

TABLE 5-10
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Salvage Program

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	1	22	22
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	5	2	10
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	10	4	40
Consistency with Local Plans, Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	9	28	252
Availability of Markets	Very Limited		Moderately Limited		Readily Available	10	12	120
Total						91	100	709

TABLE 5-9
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Manual Material Recovery Program

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	9	22	198
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	10	2	20
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	2	7	14
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	2	28	56
Availability of Markets	Very Limited		Moderately Limited		Readily Available	7	12	84
Total						83	100	608

TABLE 5-13
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Other City Recycling Programs

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	2	22	44
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	8	7	56
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	8	8	64
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available	9	12	108
Total						86	100	664

TABLE 5-11
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Staffed Drop Off Centers

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	4	22	88
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	8	2	16
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	6	5	30
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	4	4	16
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	6	28	168
Availability of Markets	Very Limited		Moderately Limited		Readily Available	6	12	72
Total						78	100	602

TABLE 5-14
RECYCLING COMPONENT
PROGRAM EVALUATION
City of La Habra

Other Commercial and Industrial Recycling Programs

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	10	22	220
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	8	3	24
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	8	7	56
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	4	8	32
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	6	2	12
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	4	28	112
Availability of Markets	Very Limited		Moderately Limited		Readily Available	8	12	96
Total						84	100	688

TABLE 5-13
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Other City Recycling Programs

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	2	22	44
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	8	7	56
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	8	8	64
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available	9	12	108
Total						86	100	664

TABLE 5-8
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Centralized Commingled Collection – Multifamily

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	8	22	176
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	8	2	16
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	4	7	28
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	5	4	20
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	3	28	84
Availability of Markets	Very Limited		Moderately Limited		Readily Available	6	12	72
Total						78	100	593

TABLE 5-15
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Commingled Curbside Collection – Single family

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	8	22	176
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	8	2	16
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	4	7	28
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	6	28	168
Availability of Markets	Very Limited		Moderately Limited		Readily Available	6	12	72
Total						83	100	685

TABLE 5-16
RECYCLING COMPONENT
PROGRAM EVALUATION
City of La Habra

Centralized Source Separated Collection – Multifamily

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	7	22	154
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	5	4	20
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	5	4	20
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	3	28	84
Availability of Markets	Very Limited		Moderately Limited		Readily Available	6	12	72
Total						75	100	573

TABLE 5-17
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Mechanized Material Recovery Program

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	10	22	220
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	9	2	18
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	7	28	196
Availability of Markets	Very Limited		Moderately Limited		Readily Available	6	12	72
Total						94	100	805

TABLE 5-18
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Unstaffed Drop Off Centers

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	3	22	66
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	4	2	8
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	6	7	42
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	5	5	25
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	10	4	40
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	9	28	252
Availability of Markets	Very Limited		Moderately Limited		Readily Available	4	12	48
Total						79	100	647

TABLE 5-19
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

Buyback Recycling Centers

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	5	22	110
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	9	5	45
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	8	4	32
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	5	4	20
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	5	28	140
Availability of Markets	Very Limited		Moderately Limited		Readily Available	9	12	108
Total						82	100	624

TABLE 5-20
RECYCLING COMPONENT
PROGRAM EVALUATION

City of La Habra

City Office Paper Recycling

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	3	22	66
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	4	2	8
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	10	4	40
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available	8	12	96
Total						89	100	693

TABLE 5-21
RECYCLING COMPONENT
PROGRAM EVALUATION
City of La Habra

Commercial Office Paper Recycling

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	8	22	176
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	5	2	10
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	7	3	21
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	5	8	40
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	8	4	32
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	5	28	140
Availability of Markets	Very Limited		Moderately Limited		Readily Available	8	12	96
Total						87	100	685

TABLE 5-22
SUMMARY OF RECYCLING PROGRAM EVALUATIONS

Program	Total Score
Certified recycling centers	823
Mechanized Material Recovery Program	805
Separated Curbside Collection, Single Family	751
Salvage Program	709
City Office Paper recycling	693
Other Commercial and Industrial Recycling Programs	688
Commercial Office Paper Recycling	685
Commingled Curbside Collection, Single Family	685
Other City Recycling Programs	664
Unstaffed Drop Off Centers	647
Buy Back Recycling Centers	624
Manual Material Recovery Program	608
Staffed Drop Off Centers	602
Centralized Commingled Collection, Multifamily	593
Centralized Source separated Collection, Multifamily	573

5.6 Selection of a Recycling Program

From the identified programs, 7 programs were selected primarily on the basis of ability to meet short- and medium-term goals. These programs are designed to increase recycling by 12,649 tons by 1995 and by 26,344 tons by 2000.

5.6.1 Selected Alternatives

[18733.4, 18735.4(a),(b)(1),(2)]

A combination of programs was considered the best approach to meeting this goal in a cost effective manner and increasing the level of public awareness at the same time. Other important reasons for selecting a combination of programs were: effectiveness to target materials identified in Section 5.2.4 (developed from the generators and materials identified by Orange County); ability to build on existing programs; the likelihood of continued or increasing marketability; and the ability to influence the demand for products with recycled content. The combination of programs consists of:

1. **Source Separated Curbside Collection**--Continue with curbside collection from single family residences of the materials which are presently being collected, i.e. glass, newspaper, aluminum cans, tin cans, PET, and HPDE.
2. **Materials Recovery Facility (MFR)**--Divert the waste stream from industrial, commercial, and multifamily residences to a Materials Recovery Facility (either in Stanton or Anaheim) by 1994. 100% participation would be achieved for these generators.
3. **Unstaffed Drop Off Centers**--Support drop off centers run by non-profit groups by providing technical assistance and public information. The materials collected would depend on the selection made by the non-profit groups.
4. **Certified Recycling Centers**--Support certified recycling centers by providing technical assistance, and working with them to develop a public information and education program.
5. **City Agency Recycling Programs**--Expand the City office paper recycling and initiate other recycling programs for City agencies.
6. **Salvaging**--In collaboration with other cities or with the County, La Habra will support efforts to enhance the efficiency of salvaging at the landfill. In particular, this activity may be improved such that the waste disposed of by private haulers may be more effectively gleaned.
7. **Procurement Policy**--Develop a procurement policy that does not exclude recycled products and which considers price differentials for the purchase of products with recycled content.

5.6.2 Short- and Medium-Term Diversion Quantities

[18733.4, 18735.4 (b)(2)]

Targeted diversion quantities from the selected programs are compiled in Table 5-23.

SHORT-TERM (1990-1995)

With La Habra's current recycling rate at approximately 22%, the City needs to increase the rate by 3% by 1995 to meet the short-term mandate. The City of La Habra has set a goal to increase recycling by 10% to allow for unforeseen changes that could offset recycling efforts.

Short-term diversion quantities have been estimated based on the program selection. These programs, upon implementation, will increase recycling by 12,649 tons by 1995. A breakdown of the anticipated recycling program achievements are shown in Table 5-23. In the table, the materials and quantities diverted at the MRF were based on current recovery rates achieved by CR&R. Two of the Waste Characterization categories have been grouped together to reflect the actual recovery: high grade and mixed paper were combined under "mixed paper" and CRV and other recyclable glass were grouped under "glass."

Increases in the curbside program have been attributed to increased participation only. The curbside program is expected to receive increased participation by about 4% per year or 20% in five years and 40% in 10 years. Similarly, use of drop off centers and certified recycling centers is expected to increase by 20% by 1995 and 35% by 2000 as a result of the public education and technical assistance provided by the City. Although the promotion of drop-off centers may appear to conflict with increasing participation in the curbside program it is assumed that any unanticipated increases in one program will likely offset decreases in the other.

The City Agency programs are not expected to recycle large quantities, but the programs' value lie in the role model presented by the City. This program will serve to exemplify the City's commitment and leadership in achieving the short-term and medium-term goals.

The most significant increase is expected from the processing of commercial, industrial, and multi-family wastes through a MFR facility. The volume recycled is expected to increase from 1995 to 2000 as a result of improved efficiency and technology at the facility.

Table 5-23
 Diversion Quantities from Selected Programs
 Short- and Medium-Term Planning Periods
 City of La Habra

Program	Material	Short-Term Diversion		Medium-Term Diversion	
		(tpy)	%	(tpy)	%
Single	Aluminum Cans	28	0.03%	38	0.04%
Family	Glass	942	0.93%	1,256	1.25%
Residential	HDPE	51	0.05%	68	0.07%
Curbside Program	PET	27	0.03%	36	0.04%
	Newspaper	2,410	2.39%	3,214	3.20%
	Tin Cans	110	0.11%	146	0.15%
	Cardboard			800	0.80%
	Mixed Paper			1,490	1.49%
	Wood Waste			280.7	0.28%
	Yard Waste			4,826	4.81%
	Sub-Total	3,568	3.54%	12,155	12.11%
Drop Off Centers and Certified Recyclers	Aluminum Cans	343	0.34%	386	0.38%
	Glass	892	0.88%	1,003	1.00%
	High Grade Paper	26	0.03%	30	0.03%
	PET	71	0.07%	80	0.08%
	Newspaper	752	0.75%	846	0.84%
	White Goods	NR	0.00%	NR	
	Sub-Total	2,084	2.07%	2,345	2.34%
City Agency Recycling Programs	Aluminum Cans	NR		NR	
	Glass	NR		NR	
	HDPE	NR		NR	
	High Grade Paper	NR		NR	
	PET	NR		NR	
	Newspaper	NR		NR	
	Sub-Total	NR		NR	
Material Recovery Facility Multiple Family Residential, Commercial and Industrial	Aluminum Cans	30	0.03%	33	0.03%
	Cardboard	2,468	2.45%	2,468	2.46%
	Ferrous Metals	1,895	1.88%	1,895	1.89%
	Glass, CRV & Recyc.	113	0.11%	113	0.11%
	HDPE	611	0.61%	611	0.61%
	Mixed Paper, Mix + Hi	1,239	1.23%	1,239	1.23%
	Newspaper	460	0.46%	460	0.46%
	PET	25	0.03%	25	0.03%
	Tin Cans	33	0.03%	33	0.03%
	Mixed Plastic			1,761	1.75%
	Wood Waste			2,721	2.71%
	Yard Waste			347	0.35%
	Sub-Total	6,874	6.82%	11,707	11.66%
Salvage	All Materials	122		138	0.14%
	Sub-Total	122		138	0.14%
ALL PROGRAMS	TOTALS	12,649	12.54%	26,344	26.25%

NR = Not Recorded or Available (Proprietary Information)

Actual recycled quantities from the City Agency Recycling Programs are expected to be small.

MEDIUM-TERM (1995-2000)

It is anticipated that the effect of the selected programs will be an increase in the recycling rate by much more than 25%. But to meet the medium-term goals, additional actions will be required. Three aspects of the approach to recycling will be evaluated: the need to refine existing programs, the effects of public education, and the need to add additional programs.

La Habra will focus on refining the programs in response to market conditions, operating conditions and other influences. Refinements may include variations of the existing programs such as requiring commingled source separated materials collection from specific generators, such as from the industrial sector. This would increase recycling by reducing the quantity of contaminated materials not meeting market specifications.

An analysis will be performed to evaluate the public and private sector's attitudes toward waste diversion change as a result of the public education efforts; additional increases in recycling may occur as a direct result. In particular, as school children are exposed to the importance of waste diversion, these children will develop into teens and adults with improved waste generating habits.

The third consideration for the medium-term is the diversion of additional materials by the selected programs: yard waste, wood waste, mixed plastics, and mixed paper would be diverted through both the curbside and MRF programs. The wood and yard waste diversions are also discussed in the Composting Component, Section 6.

Medium term diversion quantities would be increased by 26,344 tons from recycling by 2000.

5.6.3 Markets for Diverted Materials [18733.3,18735.3(c)(4), 18733.4(c)(1),(2) and (d)]

Markets for the diverted materials will be a crucial element for successful maintenance of the diversion goals. Potential markets and end-users have been identified and compiled in Appendix B for this purpose. As an integral part of each program, the recycling specialist and other identified responsible parties will work together to develop a marketing strategy to provide long-term stability of the diversion program. The recycling specialist will continue to identify existing and potential markets and encourage the development of markets through dialogue with the CIWMB, the potential markets, the generators, and the processors.

As part of the strategy, the City, through the recycling specialist, will work with existing and emerging markets; focus on identifying new demands for materials; institute materials specifications; and provide an additional level of quality control to recyclers, the waste hauler, and MRF operators. The recycling specialist will monitor the condition of collected materials to ensure that materials continuously meet market specifications and have secure marketability. The recycling specialist will also work with local businesses and businesses that are planning to locate nearby to identify potential uses for processed materials. The recycling specialist will coordinate efforts among the generators, transporters, processors, and potential end users.

The City will prepare a contingency plan in the event materials cannot be sold or otherwise recycled. The plan will include identifying a suitable site for stockpiling materials, an economic analysis of the costs involved in stockpiling or donating materials, and contingency measures that may be used to increase recycling rates of materials that remain saleable. If unfavorable market conditions do occur, the City will identify a site where source separated materials may be stockpiled in accordance with zoning, health, and environmental regulations. The City will direct the waste hauler to continue to collect the materials as long as feasible and to process the collected materials to meet the requirements for stockpiling.

5.6.4 Methods for Handling and Disposing

[18733.4, 18735.4,(b)(4)]

For the selected programs, all wastes that are not diverted to certified recyclers or others by private parties will be collected by the waste hauler in refuse and recycling trucks. The diverted materials will be directed to CR&R MRF in Stanton or CVT MRF in Anaheim for processing. Wastes which cannot be diverted, either from the source or from the MRF will be disposed of at the Olinda Landfill.

5.6.5 Facilities Utilized

[18733.4, 18735.4,(b)(5)]

Only one facility would be utilized for diversion of wastes by recycling: the Materials Recovery Facility operated by CR&R in Stanton, Orange County or the CVT Material Recovery Facility in Anaheim. Both facilities have in excess of 1800 tons per day permit limits, therefore the facilities are not expected to run out of capacity or require expansion beyond the existing site although some additional picking lines and conveyor belts will likely be required as wastes from several cities in the region are diverted to the MRFs.

Materials that will not be diverted will be disposed of at the Olinda Landfill, Orange County, as is currently being done.

No new facilities would need to be built.

5.6.6 End Uses of Materials

[18733.4, 18735.4 (b)(3)]

End uses of recovered materials are listed below:

- Wood and yard wastes are used to produce compost, mulch and boiler fuel.
- Mixed paper used in low grade paper such as paper towels and paper board, locally and in Pacific Rim Countries.
- Aluminum cans, glass containers, cardboard, high grade paper and newspaper are used to remanufacture the same products.
- PET, HDPE, and mixed plastic are used to construct new plastic items such as packing materials, cassettes, and car stops. Some of these plastics will likely be used by Coca Cola bottlers to make new beverage containers from recycled beverage containers.
- Tin cans and ferrous metals are used for manufacture of a wide variety of ferrous products.

5.7 Recycling Program Implementation

[18733.5, 18735.5 (a) (b) (c) (d) (e)]

Implementation of the six programs is presented in tabular form in Table 5-24 for both the short-term and medium-term planning periods.

5.7.1 Responsible Organizations

Table 5-24 shows the responsible organizations for each program.

5.7.2 Implementation Tasks

The implementation tasks are shown in Table 5-24.

5.7.3 Implementation Schedule

Table 5-24 shows the implementation schedule and indicates when evaluation and reassessment of the programs will be necessary.

5.7.4 Cost and Revenue Sources

Table 5-24 lists costs and revenue sources. Funding for monitoring and evaluation of the implemented Recycling Component Programs are included in the estimated costs on Table 5-24.

Scavenging A common setback for drop off centers and curbside recycling programs is poaching. Scavenging can cause a major impact on revenues. For curbside programs, scavengers typically steal the materials with highest CRV and/or scrap values, aluminum cans in particular. This greatly alters the cost:revenue ratio. The City will review and possibly modify policies and ordinances to strengthen restrictions on solid waste ownership, handling, and transportation rights as part of the Ordinance Revision Program identified in Section 4, Source Reduction.

Long term responses to curb scavenging will be dependent on the severity of scavenging in the City. While scavenging may influence the cost of programs, it is unlikely that it will adversely influence the attainment of diversion goals. Materials that are removed by poachers from one program will be diverted and recorded through other programs, such as certified recyclers and buy back centers where cash value is received for the materials and records of the transactions are maintained.

5.8 Recycling Program Monitoring and Evaluation

Monitoring and evaluating recycling programs will require establishment of parameters:

- Methods used to evaluate achievement of objectives
- Criteria for evaluating effectiveness

- Agency responsible for monitoring and reporting
- Funding
- Contingency measures

5.8.1 Monitoring and Evaluating Methods

[18733.6(a),(b)(1)(2) and (3)]

Several techniques will be utilized by the City for monitoring and evaluating participation and effectiveness:

- Recordkeeping
- Surveys
- Recycling declarations by businesses
- Analysis of City purchases
- Series of waste characterization, generation, and diversion studies
- Assessment of changes to the production and use of products and packaging.

Recordkeeping Required record keeping and reporting is the best method for evaluating overall effectiveness of the selected programs. Recordkeeping, particularly by the waste hauler, certified recyclers, non-profit groups, City employees, and salvagers will be requested by the City. The records will be requested on a quarterly basis.

Surveys A supplementary method will be to issue a survey to participants to evaluate participation and obstacles to higher participation rates. An additional survey may be performed by telephone or by mailing. The survey would be performed on an annual basis as needed.

Recycling Declarations Even with recordkeeping and surveys, not all recycling by the commercial, industrial, and construction/demolition sectors will be recognized. A third monitoring method would need to target materials that are not collected by any of the six programs listed above but instead are recycled through the ongoing practice of independently selling recyclables to markets. An effective method to evaluate this process will be to request businesses to complete a recycling declaration form as part of the business license renewal process. The declaration will be requested each time the license is renewed.

Analysis of City purchases Another method would not directly evaluate recycling collection programs but would focus instead on another aspect of recycling, i.e. the purchase of goods with recycled content. By analyzing the purchases of the City, it may be determined whether the City is able to encourage recycling. The procurement policy and purchases would be evaluated on an annual basis.

Additional Studies A series of waste generation, diversion, and characterization studies repeated over the ten year planning period will be used in conjunction with the previous methods. Additional waste sorts will be needed to adjust the percentages of each material found in the waste stream. Waste disposal quantities (tpy) will be obtained from the waste hauler and compared to current disposal rates. Revised diversion rates will be reported in tons per year and percentages.

Product and Packaging Assessment Through a literature review and through contact with manufacturers, the City will assess the impact of recycling activities on the selection of product and packaging materials and the design, production, distribution, and sale of products and packaging. The assessment will be performed at the end of the short-term planning period and will be used to help reassess the objectives for the medium-term planning period.

5.8.2 Criteria

[8733.6 (c)(1)]

Criteria for monitoring and evaluating will include the following:

1. Were the targeted recycling objectives attained?
2. Did the responsible parties execute the required tasks?
3. Were the tasks implemented on schedule?
4. Did the targeted sectors participate in the anticipated manner?
5. Were all recovered materials successfully marketed or used?

5.8.3 Responsible Agency

[8733.6 (c)(2)]

The designated recycling specialist (Recycling Coordinator) will be responsible for the monitoring, evaluation, recommendations, and reporting. The report would be submitted to the Planning Commission, Public Services Department, City Manager, and City Council for information and action as needed. Other responsible parties are noted in Table 5-24.

5.8.4 Funding and Revenue

[8733.6(c)(3)]

Funding requirements of all selected recycling programs including monitoring and evaluations are displayed on Table 5-24. Although some revenues are anticipated to be generated from the implementation of these programs a long term revenue source cannot be assured in the expected unstable market conditions. Therefore, the City has elected to establish program funding mechanisms which can be adjusted as necessary to assure continued program implementation.

5.8.5 Contingency Measures

[8733.6(c)(4)(A) and (B)]

If the criteria identified in Section 5.8.2 are not met, the City will consider implementing contingency measures:

1. If the targeted recycling objectives are not attained, the City will consider implementation of the following:
 - Survey the sectors involved to identify the reasons for the lack of program success.
 - Evaluate incentives through an awards program.
 - Increase public education in terms of frequency and/or number of targets.
 - Revise goals to reflect more realistic conditions.
 - Increase frequency of monitoring and producing an evaluation of progress.
2. If required tasks are not executed by the responsible agency, the City will consider implementation of the following:
 - Evaluate adequacy of City staffing and project time allocations.
 - Revise job and task descriptions.
 - Evaluate coordination between City divisions.

- Identify reasons for lack of private sector participation.
3. If tasks are not implemented in a timely manner, the City will consider implementation of the following:
- Evaluate adequacy of City staffing and project time allocations.
 - Revise job and task descriptions.
 - Increase frequency of monitoring and producing an evaluation of progress.
 - Evaluate coordination between City divisions.
 - Identify reasons for lack of private sector participation.
4. If target sectors fail to participate adequately or as anticipated in the recycling programs, the City will consider implementation of the following:
- Survey the sectors to identify the reasons for their lack of participation.
 - Increase incentives.
 - Increase access to technical assistance.
 - Increase appropriate education and promotional activities.
5. If markets and end-users prove inadequate, the City will consider implementation of the following:
- Perform market survey to determine problems with, or constraints to marketing and using recovered materials.
 - Investigate cost effectiveness of end-use alternative.
 - Explore alternative markets and end-uses.
 - Increase market outreach, education, promotion, and advertising.
 - Investigate marketing and coordination with other jurisdictions to improve materials salability.
6. If some aspect of the diversion program does not meet local, state, or federal regulations, the City will consider implementing the following:
- Identify the problem areas.
 - Correct problems to meet local, state, and federal regulations, as appropriate.

**TABLE 5-24
RECYCLING PROGRAM IMPLEMENTATION
CITY OF LA HABRA**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs	
				Public	Private
Source Separated Curbside Collection	Recycling Coordinator Public Services Dept. Planning Commission Planning Department City Manager City Council Waste Hauler	SFR Curbside throughout short-term planning period	1991	N/A	\$96,000
		Evaluate effectiveness in short-term planning period.	1993 - 1994	\$7,500	
		Reassess performance during medium-term planning period.	1995 - 1997	to be determined	
Materials Recovery Facility - Multifamily Residential Commercial Industrial	Recycling Coordinator Public Services Dept. Planning Commission Planning Department City Manager City Council Waste Hauler MRF Operator	Negotiate with hauler to divert wastes to MRF.	1992 - 1994	\$5,000	
		Divert commercial, industrial, demolition, and Multifamily residential waste stream to MRF by 1994.	1994 Ongoing	N/A	\$376,000
		Assess diversion efficiency in medium-term planning period. Renegotiate contract to increase diversion rate by adding new materials (Table 5-11).	1997	To be determined	

**TABLE 5-24
RECYCLING PROGRAM IMPLEMENTATION
CITY OF LA HABRA**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs	
				Public	Private
Unstaffed Drop Off Center Promotion	Drop Off Center Oprtrs. Recycling Coordinator Public Services Dept. Planning Commission City Manager City Council	Contact drop off center operators. Identify areas where improvements can be made. Provide technical assistance.	1993 - 1994	\$7,000 to \$10,000	
		Develop public information campaign to improve public awareness of drop off locations and materials. Develop monitoring and evaluation program.	1993 - 1994	Costs Included In Section 8 Public Education and Information	
		Provide technical assistance and public information as needed.	1993 - 1994	Costs Included In Section 4 Source Reduction	
		Assess program performance and improvement measures.	1995 - 2000	\$3,000 to \$5,000 per year	
Certified Recycling Center Promotion	Certified Recyclers Recycling Coordinator Planning Commission Planning Department City Manager City Council	Meet with certified recyclers and assess their needs. Develop reporting system to City by recyclers.	1992 - 1993	\$5,000 to \$7,000	
		Provide technical assistance. Develop joint public information campaign to educate public about Certified Recyclers. Assist recyclers to identify opportunities for expansion of facilities and materials accepted.	1992 - 1993	Costs Included In Section 8 Public Education and Information	
		Continue to assist certified recyclers as needed. Reassess efficiency of program.	1994 - 2000	\$2,000 to \$3,000 per year	

**TABLE 5-24
RECYCLING PROGRAM IMPLEMENTATION
CITY OF LA HABRA**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs	
				Public	Private
City Agency Recycling Programs	City Employees City Department Heads Recycling Coordinator Planning Commission Planning Department City Manager City Council	Expand high grade paper recycling program. Develop and Initiate other recycling programs.	1993 - 1994	\$3,000 to \$4,000	
		Organize department employee recycling projects. Provide educational materials and technical assistance to employee run programs. Develop monitoring and evaluation program.	1993 - 1994	\$4,000	
		Present awards to best programs on annual basis. Reassess programs to improve performance on annual basis.	1994 - 2000	\$500 to \$1,000	
Salvaging	Orange County Local Task Force Recycling Coordinator County Local Task Force Planning Commission Planning Dept. City Manager City Council	Develop dialogue among County, other cities, and La Habra to perform feasibility study of regional salvaging and set salvaging objectives. Establish monitoring and evaluation program.	1991 - 1993	\$3,000 to \$5,000	
		Implement salvaging improvements. Reassess annually.	1994 - 1995	Costs will be incurred by IWMD.	
		Assess salvaging program effectiveness and modify as appropriate.	1996 - 2000	Current revenues exceed current costs	

Section 6

Composting Component

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

Section 5

Composting Component

Opportunity
Physical Design

Source Reduction and Recycling Element

2014/2015
Daniel M. Collins

SECTION 6 COMPOSTING COMPONENT (18736)

6.1 Introduction

Composting is a natural, aerobic (oxygen dependent) degradation process by which plant and other organic wastes decompose under controlled conditions. Compost is the product resulting from the composting process, is dark-brown in color, humus-like, with a crumbly texture and earthy odor. Typical volume reductions of organic wastes due to composting are in excess of 50 percent.

Compost makes a valuable soil amendment, and may be used as a fertilizer substitute. Composting programs can be designed to handle yard wastes, municipal solid wastes, agricultural wastes, and sewage sludge wastes. The term "yard wastes" includes shrubby and leafy yard wastes and is also referred to as green wastes.

6.2 Component Goals and Objectives (18736.1)

The City has developed specific goals and objectives to be accomplished during the short and medium-term planning periods of the SRRE. These are as follows:

6.2.1 Component Goals

- Develop a composting program that will meet the needs of the City and comply with the requirements of the Integrated Waste Management Act of 1989.
- Reduce, in combination with source reduction and recycling, the amount of solid waste generated within the jurisdiction of the City by 25 percent by the year 1995, and by 50 percent or as much as feasible by the year 2000.

6.2.2 Short-Term Objectives (1990-1995) (18733.1(a))

- By 1994, begin collecting data and developing a baseline for establishing a viable composting program in the medium-term planning period.

6.2.3 Medium-Term Objectives (1995-2000)

(18733.1(a))

- Investigate the possibility of composting 5% of the green, yard, and wood waste generated from La Habra through use of a curbside collection program. Begin program in 1997.
- Begin development of a program that will compost 3% of the waste generated from La Habra through use of a centralized waste processing facility that will target yard and wood wastes from commercial, industrial, and multifamily residences. Begin program in 1997.
- Develop community education programs by 1996 that emphasize the need for and the benefits of composting.
- By 1997, distribute compost for City use in parks, green belts, and other areas.
- 1995 through 2000: Continue to support the development of local and regional markets for compost.

6.2.4 Targeted Materials

(18733.1(b))

Based upon the Orange County Waste Characterization Study (Table 6-1) and the criteria provided within the State planning guidelines (Table 6-2), wood wastes and yard wastes have been targeted for composting.

TABLE 6-1
1990 WASTE GENERATION QUANTITIES

Material	Tons/Year	*Percent
Yard Wastes	9,065	16%
Wood Wastes	<u>5,963</u>	<u>11%</u>
Total	15,028	27%

*Percent of total waste stream.

Source: Orange Co. Solid Waste Management Dept.

TABLE 6-2
CRITERIA USED FOR TARGETING MATERIALS

Category	1	2	3	4
Yard Waste	X	X		
Wood Wastes	X	X		

Legend

1. High volume material (18733.1(b)(1))
2. High weight material (18733.1(b)(2))
3. Hazardous material (18733.1(b)(3))
4. Made from non-renewable resources (18733.1(b)(4))

As seen in the tables, yard and wood wastes comprise a significant portions of the residential, commercial, and industrial waste streams. As high volume and high weight materials, yard wastes and wood wastes will need to be targeted for diversion in the medium-term planning period for the City to achieve a 50 percent diversion rate.

6.3 Existing Conditions Description (18736.2)

The City has attempted to identify and quantify current composting activities operating within the County, the City, and the private sector. These are as follows:

6.3.1 County-Wide Programs [18733.2(a)]

The Orange County Solid Waste Management Department operated a pilot project for shredding and composting at the Olinda/Alpha Landfill. Since the start-up date in July, 1990, the pilot project has shredded approximately 32,000 tons of yard waste. However, the South Coast Air Quality Management District (SCAQMD) has now withdrawn the operating permit for the Diesel-powered shredder due to revised emission standards. Therefore, the County has suspended operations until the shredder is retrofitted to operate with electricity. Completion of the retrofitting is expected during 1992.

The County is interested in gaining approval for using compost as a daily landfill cover, and obtaining solid waste diversion credit towards its County SRRE. Currently, there are regulations restricting the use of compost as a daily landfill cover. However, if the plan is approved, the City may also divert portions of its yard and wood wastes for landfill cover and gain similar diversion credits.

6.3.2 City-Wide Programs

[18733.2(a)]

The City of La Habra does not have and has not had a composting program within its jurisdiction. Tree trimmings and stump removals from City maintained streets and parks are directed to a variety of destinations depending on who performs the work. If the work is performed by City employees, the chipped trimmings and stumps are used to balance uneven subsidence at the closed Vista Grande Landfill which is now a bird sanctuary. If contractors perform the work, the chipped waste is either sent to the landfill or diverted to composting facilities operated by landscapers located outside of the city. Actual quantities diverted or disposed are unknown.

6.3.3 Private Program Descriptions

[18733.2(a)]

Several private companies in Orange and Riverside counties, including Recyc Inc, United Pacific Corporation, Golden West Inc, and Blue Ribbon Inc. have established composting operations and end-use markets for composted organic materials. Much of the compost is distributed to local nurseries in Orange County. Some of the compost is delivered to co-generation plants in Orange County.

It is unknown how much composting by the private sector is occurring on yard and green wastes generated in La Habra. However, it is expected that composting operations will expand in the near future as the requirements of the Integrated Waste Management Act of 1989 increase the supply of compostable material and promote the use of compost. No composting operations are expected to decrease as a result of implementing the SRRE.

6.4 Identification of Alternatives

(18736.3)

The City has identified collection, processing, and composting alternatives for yard and wood wastes and evaluated them for local implementation:

- Curbside Collection
- Drop Off Collection
- Centralized Waste Processing
- City Operated Processing and Composting Facility
- Privately Operated Processing and Composting Facility
- County Operated Processing and Composting Facility

The programs are described in Section 6.4. In Section 6.5 the programs are evaluated. Tables 6-3 through 6-8 show the program ratings with numerical ratings assigned. Each rating is weighted according to the weighting factors assigned by the City to each of the criteria. Program selections are discussed in Section 6.6

6.4.1 Curb-Side Collection

[18736.3(a)]

In curbside collection, yard and wood wastes would be collected in designated containers, paper bags, or plastic bags from single family residences (and possibly other generators later). Bulky wood and shrub wastes would be collected as is or processed immediately through a chipper hooked onto the back of the collection vehicle. Collection would be performed by the City, by the waste hauler, or through separate contract with a composting company. Collection vehicles may range from trailers to fully automated refuse collection vehicles.

As part of the program, Christmas trees would be collected annually for composting. The trees would need to be free of contaminants, such as flock and nails, prior to chipping.

City Role: In this type of program, the City's responsibility would be to initiate and administer a curb-side collection program operated by others. The City would provide educational information to the public and monitor waste reduction effectiveness and participation rates.

6.4.2 Drop-Off Collection

[18736.3(a)]

A drop-off program would involve the use of drop off centers where generators would bring woody and yard wastes for centralized collection. It is likely that the wastes would be delivered without substantial size reduction by the generators. The wastes would be stored onsite in piles or in bins before handling further. Additional handling would likely be limited to transporting the waste to a composting facility with or without size reduction first.

Size reduction is normally performed with the use of large, noisy equipment such as grinders and trommels. Limitations may be placed by local ordinances or institutional barriers on locating noisy equipment at potential drop off locations.

Drop-off centers require a smaller investment in equipment and personnel than curbside collection, yet may result in significantly smaller participation rates due to disposal inconveniences. One option is to ban placement of yard and wood wastes in regular garbage cans.

City's Role: The role of the City in this type of program would be to fully implement a drop-off program for yard and wood wastes. The program would be directed and administered by the Public Services Department but actual site operations and material transportation may be performed through contract with the waste hauler or another party. The City would provide educational information to the public and monitor waste reduction effectiveness and participation rates.

Note that a combination of drop off and curbside programs may optimize material recovery. Residents may set out their yard and wood wastes for curbside collection while landscapers, gardeners, and other businesses deliver their yard and wood wastes to centralized drop off locations.

Prior to beginning a full-scale program, a limited program may be considered for either curbside or drop off centers. The limited program would involve collection on a quarterly or seasonal basis.

6.4.3 Centralized Waste Processing

[18736.3(a)]

In this program, mixed refuse including yard and wood wastes would be delivered to a centralized waste processing facility, such as a Material Recovery Facility (MRF). At the

facility, loose or bagged yard and wood wastes would be separated by hand for further processing. Processing would normally consist of size reducing by screening, chipping, and grinding. Bags containing yard and wood wastes would be shredded to remove the contents. Paper yard waste bags would be processed along with the yard waste.

This alternative requires a large investment in equipment and personnel which may be translated into higher tipping fees at the MRF. However, participation by the public is 100% since no efforts are required of the public for the program to function. With 100% participation, recovery quantities may be high. Actual recovery percentages may depend on the collection. For example if leafy yard wastes become mixed in collection with all other wastes, the recovery rate may be very small. Similarly, shrubby wastes may be broken into nonrecoverable sizes during collection.

City's Role: The City's role would be to contract with an existing MRF to separate and size reduce wood and yard wastes. The work would likely be funded through collection fees which would reflect the cost of this program. The City would administer the program and monitor the effectiveness.

6.4.4 City Operated Processing and Composting Facility [18736.3(a)]

The City could develop its own composting facility, where yard and wood wastes generated within the City could be taken for composting. This option would require land acquisition by the City, possibly through leasing or purchase. Other expenses would include acquisition of expensive equipment and hiring laborers and qualified composting supervisors. The City would also need to obtain required facility permits from the California Integrated Waste Management Board (CIWMB), develop markets and end-uses for the compost, and control environmental impacts such as leachate runoff and odors.

The composting facility would receive size reduced wastes (such as from drop off centers and City park and street services) or unprocessed wastes (such as from a curbside program or from private haulers).

City Role: The role of the City in this type of program would be to fully develop and implement a composting facility by purchasing or leasing land and equipment, obtaining required facility permits, and hiring personnel. The City would also provide public education and monitor waste reduction effectiveness.

6.4.5 Privately Operated Processing and Composting Facility

[18736.3(a)]

This alternative involves the same processes and concerns as the preceding program but ownership and operation of the facility would be by private enterprise.

City Role: The role of the City in this type of program would be to contract with a private composting company to accept City generated yard and wood wastes. It is likely that the City would need to work with the owner to establish a site and obtain permits for construction and operation from State agencies. The City would monitor waste reduction effectiveness by obtaining documentation from the private company. Because the City is not directly involved in waste collection and handling, this alternative may be more in keeping with the City's current role as administrator.

6.4.6 County Operated Processing and Composting Facility

[18736.3(a)]

The County is planning to develop composting facilities at its landfills. Municipalities will be able to compost yard and wood wastes at the landfills. This type of program, if implemented, would likely receive the least setbacks to implementation in terms of public opposition and permitting requirements. For the City, this option may also be the least expensive and funding of the County facilities may be partially allocated from landfill tipping fees.

City Role: The role of the City in this type of program would be to work with the County and other cities within the same waste disposal region to identify region composting needs and concerns, and alternatives to operating and funding. The City would eventually contract with the County to accept City generated yard and wood wastes such that targeted diversion quantities could be secured. The City would monitor waste reduction effectiveness through records obtained from the waste hauler and/or the County.

6.5 Evaluation of Alternatives

(18736.3)

An evaluation of the composting programs was based upon the criteria identified in Appendix A and discussed in Section 4.5. The same criteria are used for evaluating all programs, i.e. composting, source reduction and recycling programs.

6.5.1 Waste Reduction Effectiveness

[18736.3(a)]

Yard and wood wastes comprise a large portion of the residential, commercial, and industrial waste streams. Because they are bulky and hard to dispose of, participation rates in curb-side collection programs are generally high. Conversely, bulkiness and handling are reasons why drop off centers would have relatively low participation rates by residents. Gardeners, landscapers, and similar generators would benefit from these programs because of the avoided transportation and landfill costs. For centralized waste processing, recovery rates will be high because little or no effort will be required by the generators to achieve full participation. However, much of the shrubby and leafy yard waste will be reduced in size and commingled with other wastes to a degree where recovery will not be efficient. Therefore the program is rated moderately high.

The waste reduction effectiveness is the same for the three processing and composting alternatives. In general, composting provides an opportunity to significantly reduce waste disposal because of the large amount of yard and wood waste in the waste stream.

6.5.2 Potential Environmental Impacts

[18733.3(a)(2)]

A curbside collection system would require separated storage of yard waste by the generator. If yard wastes are collected with the same frequency as the normal refuse collection, then no impacts to the environment or public health should occur. However, traffic and air pollution will increase because of the need for a second collection vehicle to cover the same routes as the refuse service.

Drop off centers will produce fewer environmental impacts although there will be a local increase in noise from large equipment.

Minimal impacts to the environment would be caused by a materials processing facility as long as stored organic matter is prevented from putrefying or providing habitat for vectors. Traffic impacts would not increase.

The location of a processing and composting facility would greatly affect the level of impact the facility may produce on the environment because of traffic, noise, and dust. For this reason, the County operated facilities at landfills would be perceived as having the lowest impact. Privately and City owned facilities would have the same level of impact assuming both were located in the city. Concerns common to all three alternatives are leachate runoff, odors, and vector control.

6.5.3 System Flexibility

[18733.3(a)(3)]

All composting programs are rated somewhat inflexible because they are dependent on producing a limited range of marketable products, namely compost and compost-based soil amendments. Some flexibility exists in that other non-composted products may be produced from yard and wood wastes. Simply by reducing the size of shrubby yard wastes and wood wastes, these wastes become a useable product; mulch. Production of mulch for ground covering purposes may supplement the production of compost. Mulching is evaluated as part of the source reduction component.

6.5.4 Changes in Waste-Type Generation or Use

[18733.3(a)(4)]

Composting programs are not expected to significantly influence the type of waste generated although the effort required to participate in curbside collection and drop off center programs may encourage participants to produce less yard and wood waste.

As a result of the composting facilities programs, some positive changes will occur in waste-type use, i.e. more gardening products will be available on the market for consumers and businesses to use.

6.5.5 Ability to be Implemented

[18733.3(a)(5)]

Implementing a curbside collection program would require the selection of collection equipment and containers, procurement of collection vehicles, implementation of a public education program, and the co-development of a means to process the collected wastes. The implementation rate would be moderate.

Drop-off programs would be less easily implemented assuming that a site would have to be located and permitted, additional equipment would be needed, and personnel selected and trained. The drop off program is rated low.

Centralized waste processing programs require the construction of new facilities and obtaining State permits. Permits could substantially impede implementation.

For the City and privately operated facilities, the likelihood of early implementability is very low. For a County operated facility in a remote location, early implementability is low.

6.5.6 Acceptability by Public Sector

A curbside collection program would require substantial public education to promote source separation of yard and wood wastes. Low public sector acceptability is expected during the initial two to three years of implementation unless the program is mandatory. Similarly, drop off centers are expected to be only moderately utilized by the public sector. Centralized waste processing will likely be highly accepted as an alternative to source separation or drop off centers.

City, County, and privately operated composting facilities will likely be viewed as expensive because of the likely increases to refuse service charges that will occur as a result of yard and wood waste collection and processing. Public acceptance is rated low.

6.5.7 Acceptability by Private Sector

A curbside program is not expected to impact the private sector significantly and is rated moderate. The drop off centers are rated very high because many landscape maintenance businesses will view the centers as a less expensive alternative than disposal. The centralized processing facility alternative will likely receive high acceptance as an alternative to commercial and industrial source separation type programs.

City and private composting facilities may be opposed on the basis of cost to the generator and the programs are rated very low. The County alternative is rated moderate because the cost will be shared by many and economy of scale will support the alternative.

6.5.8 New or Expanded Facility Requirements

[18733.3(a)(6)]

Curb-side programs do not require the construction of new, or expansion of existing collection facilities.

The drop-off program would require the construction of new collection facilities although the facility requirements would be minor.

A centralized waste processing program would rely on some modifications of the CR&R MRF at Stanton, or the CVT MRF in Anaheim, neither of which currently have yard and wood waste processing capabilities.

City, private, and County operated composting facilities would all require extensive construction of new facilities.

6.5.9 Consistency with Local Plans, Policies, and Ordinances

[18733.3(b)(1)]

Curb-side programs are consistent with local plans, policies, and ordinances. Drop-off programs are consistent with local plans and policies, yet may not be consistent with ordinances depending on the location of the drop off center. Use of the existing centralized waste processing facility in Stanton is consistent with local plans, policies, and ordinances.

A City operated facility is not consistent with existing policies and the limited role of the City in waste handling. A privately operated facility would be consistent with local plans and policies. Consistency with ordinances would depend on location. A County operated facility is completely consistent with City plans, policies, and ordinances.

6.5.10 Potential Institutional Barriers

[18733.3(b)(2)]

The curbside, drop off, and centralized waste processing programs are expected to confront few institutional barriers.

City, private, and County operated facilities may have difficulties in obtaining State permits and facility siting. Contracting with a privately operated facility or using a County operated facility are not expected to produce potential institutional barriers for the City.

6.5.11 Total Implementation Costs [18733.3(b)(3)]

Start up of a curbside collection system for yard wastes is estimated to cost approximately \$200,000 for a new vehicle, initial bag distribution, and initial public education. Annual costs for the program are estimated at \$500,000. This cost may be more if bags are supplied by the waste hauler or City.

Drop-off collection costs are unknown at this time but are assumed to be less than curbside collection.

City and County operated facility costs are unknown at this time. For a City operated facility, the cost for processing only (not including composting) is estimated to be \$200,000 for site acquisition and improvements, a scale, grinder, trommel, front-end loader, dump truck, fuel tank, and conveyors. Annual costs for personnel, fringe benefits, indirect costs, and potential equipment rental are estimated at approximately \$200,000. The cost to start up a composting site is estimated at \$300,000 for site improvements, a second front-end loader, an office, a windrow turner (optional, \$50,000), a water truck, and a second trommel screen. Annual costs for composting is estimated at \$200,000 for personnel, fringe benefits, indirect costs, and potential equipment rental. Additional costs may include landfill costs for compost rejects. Revenue is estimated at \$14 to \$16 per ton of bulk (unbagged) compost. Bagged compost may produce higher revenue.

Centralized waste processing costs are estimated to be an average of \$65/ton. A privately operated facility is assumed to cost the same as at a centralized processing center, i.e. \$65/ton.

6.5.12 Availability of Markets

[18733.3(b)(4)]

Traditionally the markets for compostable materials are low, and are expected to decrease as new composting facilities develop unless new markets are developed. If the markets for compostable materials do not develop or drop significantly, a curbside or drop off program could be forced to discontinue operations. Under poor market conditions a centralized facility should be able to maintain operations by recovering other materials and restart yard and wood wastes when the market improves. However, if the processor is obliged by contract to guarantee a composting rate, this may have significant impacts on the solvency of the whole operation.

Under poor market conditions, a City operated facility could be quickly impacted, causing serious economic ramifications. A privately operated facility will also be highly sensitive to market conditions. If a composting facility is operated by the County at the landfill, the County may be obliged to temporarily dispose of excess materials. While impacting the diversion credits of the County and affected cities, the long term effects would not be serious financial impairment.

TABLE 6-3
COMPOSTING COMPONENT
PROGRAM EVALUATION

City of La Habra

Curb Side Collection

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	7	22	154
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	6	3	18
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	3	2	6
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	7	3	21
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	6	7	42
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	3	5	15
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	6	8	48
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	6	4	24
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	4	28	112
Availability of Markets	Very Limited		Moderately Limited		Readily Available	1	12	12
Total						67	100	504

TABLE 6-4
COMPOSTING COMPONENT
PROGRAM EVALUATION

City of La Habra

Drop-Off Collection

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	5	22	110
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	8	3	24
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	3	2	6
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	7	3	21
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	4	7	28
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	5	5	25
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	9	8	72
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	7	4	28
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	8	2	16
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	4	28	112
Availability of Markets	Very Limited		Moderately Limited		Readily Available	1	12	12
Total						69	100	486

TABLE 6-5
COMPOSTING COMPONENT
PROGRAM EVALUATION

City of La Habra

Centralized Waste Processing

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	7	22	154
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	9	3	27
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	3	2	6
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	4	3	12
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	3	7	21
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	8	8	64
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	2	4	8
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	6	28	168
Availability of Markets	Very Limited		Moderately Limited		Readily Available	1	12	12
Total						69	100	564

TABLE 6-6
COMPOSTING COMPONENT
PROGRAM EVALUATION

City of La Habra

City Owned Composting Facility

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	9	22	198
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	3	2	6
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	1	7	7
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	2	5	10
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	1	8	8
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	1	4	4
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	3	2	6
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	3	4	12
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	0	28	0
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						34	100	284

TABLE 6-7
COMPOSTING COMPONENT
PROGRAM EVALUATION

City of La Habra

Privately Owned Composting Facility

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	9	22	198
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	3	2	6
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	1	7	7
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	2	5	10
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	1	8	8
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	1	4	4
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	5	2	10
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	7	4	28
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	2	28	56
Availability of Markets	Very Limited		Moderately Limited		Readily Available	2	12	24
Total						44	100	384

TABLE 6-8
COMPOSTING COMPONENT
PROGRAM EVALUATION

City of La Habra

County Owned Composting Facility

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	9	22	198
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	3	2	6
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	3	7	21
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	3	5	15
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	5	8	40
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	1	4	4
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	7	2	14
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	7	28	196
Availability of Markets	Very Limited		Moderately Limited		Readily Available	4	12	48
Total						67	100	626

6.6 Selection of Program

(18736.4)

The following tables summarized the results of the composting program evaluations:

TABLE 6-9 SUMMARY OF COLLECTION ALTERNATIVE EVALUATIONS	
Program	Weighted Rating
Centralized Waste Processing	564
Curbside Collection	504
Drop Off Center	486

TABLE 6-10 SUMMARY OF PROCESSING ALTERNATIVE EVALUATIONS	
Program	Weighted Rating
County Operated Facility	626
Privately Operated Facility	384
City Operated Facility	284

6.6.1 Discussion of Alternatives Selected

[18733.4(a)]

Based on the preceding analysis and on the Solid Waste Generation Study, a combination of collection methods were selected: centralized processing for commercial, industrial, and multifamily generators, and curbside collection from single family residences.

For processing and composting, the best method appears to be a County operated facility at the landfill. This option appears to be compatible with both of the collection options that were selected. Materials from the curbside program would be transported to the composting site as is or after processing to reduce bulkiness. Materials collected from other generators would be separated out at the centralized processing facility. After processing to reduce bulkiness, they would be transported to the County operated composting site.

As a contingency, a privately operated composting facility that services the region is a feasible option. Collection programs would coordinate as well with this program as with the County operated program.

6.6.1.1 Curbside Collection Program

The curbside collection program was selected for single family residences for the following reasons:

- High waste diversion potential
- Compatibility with existing curbside program
- Educational value for residents
- Little new or expanded facility requirements for collection

6.6.1.2 Centralized Waste Processing

The centralized waste processing program was selected for commercial, industrial, and multifamily generators for the following reasons:

- High waste diversion potential
- Reduced potential environmental impacts
- Use of existing MRF facility
- Compatibility with planned recycling program for these generators

6.6.1.3 County Operated Processing and Composting Facility

The reasons for selecting this program are as follows:

- High waste diversion potential
- Reduced potential environmental impacts
- Relatively low total implementation costs
- Compatibility with selected collection program
- Ability to be implemented in time to meet medium-term diversion goals
- Acceptability by the private and public sectors
- Low institutional barriers
- Consistency with local plans, policies, and ordinances

6.6.2 Estimate of Diversion Quantities

[18733.4(b)]

Composting programs would be implemented in the medium-term planning period. The diversion by composting is directly dependent upon the amount that is separated from the rest of the waste stream and the ability to use or market the final product.

For the curbside program, a 50% participation/diversion rate is targeted for single family residences. For the other generators, separation will be a function of the efficiency of the materials recovery facility only unless yard and wood wastes are bagged or otherwise separated at the source. The recovery efficiency for wood wastes is estimated at 50%. Higher rates may be achievable but as yet are locally undemonstrated. For shrubby and leafy yard wastes, the recovery rate is estimated to be 20% because of contamination, breakage, biological degradation, original small size of leaves and twigs, and thorough mixing with other waste types. The estimated recovery tonnages and percentages of yard and wood wastes are shown in the following table as a function of the collection/separation method:

TABLE 6-11 ESTIMATE OF DIVERSION QUANTITIES		
Category	Tons/Year 2000	Percent* 2000
Curbside Collection Program		
Yard Waste	4,826	4.8%
Wood Wastes	<u>281</u>	<u>0.3%</u>
Total	5,107	5.1%
Centralized Waste Processing		
Yard Waste	347	0.4%
Wood Wastes	<u>2,721</u>	<u>2.7%</u>
Total	3,068	3.1%
Total Program Diversions		
Yard Waste	5,173	5.2%
Wood Wastes	<u>3,002</u>	<u>3.0%</u>
Total	8,175	8.2%
*Percent of total waste stream		

Note: These quantities are also included in Table 5-23 because the selection of diversion methods is the same for both composting and recycling programs. Quantities here are not in addition to quantities in Table 5-23.

6.6.3 Markets for Diverted Materials

[18733.4(c)]

Markets for the materials will be a crucial element for successful maintenance of the composting goals. Potential markets and end-users have been identified and compiled in Appendix B. As an integral part of each program, the responsible agencies (such as the La Habra Public Services Department, and Orange County Integrated Solid Waste Management Department) and other identified responsible parties will work together to develop a marketing strategy to provide long-term stability of the composting programs. The agencies will continue to identify existing and potential markets for materials. The City agencies will encourage the development of markets through dialogue with the CIWMB and other appropriate State agencies, with other municipalities in the region, with major generators, and existing and potential processors and composters.

To promote the use of composted materials, the City will:

Investigate the use of composted material on City maintained areas such as parks, landscaping at City offices and yards, and along road easements.

Encourage other government agencies and institutions located in La Habra to use compost.

Initiate a public information campaign to promote the use of compost by the public and private sectors.

6.6.4 Methods for Handling and Disposal

[18733.4(d)]

6.6.4.1 Curbside Collection Program

Yard and wood waste will be collected from single family residents in a separate vehicle and delivered to a processing facility. The material will be chipped either by equipment attachments on the vehicle or at a processing facility. After processing, the materials will be sorted for use in identified end products: compost, mulch, and refuse derived fuel (RDF). Unrecoverable materials will be taken to a regional landfill for disposal.

Compostable material will either be composted onsite or transported to a composting facility. The remaining material will be transported to markets. Composting would occur as described in Section 6.6.4.3.

6.6.4.2 Centralized Waste Processing

Refuse collected from the commercial, industrial, and multifamily residential sectors will be delivered to a materials recovery facility for separation and processing. Equipment needed to separate out yard and wood wastes is not currently available at the identified CR&R MRF in Stanton. The equipment would likely include front-end loaders, conveyors, bins, shredders, grinders, screens, and chippers. Unrecoverable materials will be taken to regional landfills for disposal.

Processed material would be directed to a composting facility, either on or off site. Composting would occur as described in Section 6.6.4.3.

6.6.4.3 County Owned Processing and Composting Facility

Yard and wood wastes diverted through collection programs would be sent to a County operated composting facility. The facility would have various storage areas for incoming material depending on the amount of processing the material has already undergone. Composting operations will use front-end loaders, windrow turners, water trucks, dump trucks and other large equipment to moderate the rate of biological degradation. The material will be handled to protect the environment from leachate, unacceptable air emissions (primarily odors), dust, and litter through adherence with regulatory agency rules and compliance with operating permits issued by the CIWMB..

The compost product may be sold directly at the landfill, through landscaping and nursery suppliers, and/or by retail outlets. The material may be sold in bulk by the cubic yard or bagged for easy handling of small quantities by consumers. Market development will be encouraged through advertising of local made compost and will be utilized by the City wherever feasible. Material that does not meet market specifications will be reprocessed and composted or disposed of at the landfill.

6.6.5 Description of Utilized Facilities

[18733.4(e)]

The selected program will utilize both existing facilities or systems (CR&R or CVT Materials Recovery Facilities and Western Waste collection services) and new facilities (County operated composting site). The County will be the lead agency for the planning, design, construction, and operation of the composting facility.

6.7 Program Implementation (18733.5)**6.7.1 Responsible Agencies and Personnel [18733.5(a)]**

The agency responsible for implementation of the curbside collection and centralized processing program would be the Public Services Department. This department will also be responsible for implementation of the centralized waste processing program. The lead responsible individual will be the recycling coordinator. Monitoring and evaluation reports will be submitted by the recycling coordinator to the City Manager for review and recommendations, to the City Council for information and action as needed.

The lead agency for the county owned composting facility will likely be the County Integrated Waste Management Department. The recycling coordinator from the City of La Habra will be the lead contact person to the County.

6.7.2 Implementation Tasks [18733.5(b)]

Implementation tasks are presented in Table 6-12.

6.7.3 Implementation Schedule [18733.5(c)]

An implementation schedule has been provided in Table 6-12.

6.7.4 Implementation Costs and Revenue Sources [(18733.5(d)]

The majority of implementation tasks and estimated costs will not occur until 1996. Estimation of cost four to six years in advance would be extremely speculative and are therefore not included at this time. Administrative costs associated with advance planning and market development have been estimated for the year 1995 and are denoted on Table 6-12.

6.8 Monitoring and Evaluation

(18733.6)

6.8.1 Methods of Monitoring and Evaluation

[18733.6(a)&(b)]

To monitor success of the program, the City has chosen to do the following:

- Require written documentation of the weights of materials collected
- Visually inspect the facilities where the organic materials are taken
- Require that an annual report be submitted to the City by each private waste hauler and CR&R
- Complete future waste generation studies as required

6.8.2 Written Criteria for Evaluating Effectiveness

[18733.6(c)(1)]

Criteria for monitoring and evaluation will include the following:

- Were the targeted recycling objectives attained?
- Did the responsible parties execute the required tasks?
- Were the tasks implemented on schedule?
- Did the targeted sectors participate as anticipated?
- Were all recovered materials successfully marketed or used?

6.8.3 Responsible Agencies and Personnel

[18733.6(c)(2)]

The agencies responsible for monitoring and evaluation of the selected collection programs will be the same as those identified for implementation, i.e. the recycling coordinator, the Planning Department, and the Public Services Department. Monitoring and evaluation reports will be submitted by these agencies to the Planning Commission and city manager for review and recommendations, and to the City Council for information and action as needed.

The County Integrated Solid Waste Management Department will be responsible for monitoring and evaluating the composting facility.

6.8.4 Costs and Revenue Sources

[18733.6(c)(3)]

Costs and revenue sources have been provided within the Funding Component, Section 10 for all programs scheduled for implementation within the short-term planning period. Programs scheduled for implementation in the Medium-term (1995-200) planning period will be developed with baseline data collection and market development activities in 1994 and 1995 respectively.

Revenues (if any) from implemented Composting Programs cannot be estimated at this time are not

6.8.5 Contingency Measures

[18733.6(c)(4)]

Although contingency measures have been developed, it should be recognized that conditions may change in the medium-term planning period which will warrant revisions based upon programs implemented and market conditions.

If the targeted composting objectives are not attained, the City will consider implementation of the following:

- Survey public and private sectors to identify reasons for lack of program success.
- Evaluate incentives.
- Increase public education in terms of frequency and/or number of targets.
- Revise objectives to reflect more realistic conditions.
- Increase frequency of monitoring and produce an evaluation of progress.

If required tasks are not executed by the responsible agency, the City will consider implementation of the following:

- Evaluate adequacy of City staffing and project time allocations.
- Revise job and task descriptions.
- Evaluate coordination between City divisions.
- Identify reasons for lack of public and private sector participation.

If tasks are not implemented in a timely manner, the City will consider implementation of the following:

- Evaluate adequacy of City staffing and project time allocations.
- Revise job and task descriptions.
- Increase frequency of monitoring and produce an evaluation of progress.
- Evaluate coordination between City divisions.
- Identify reasons for lack of public and private sector participation.

If target sectors fail to participate adequately as anticipated in the recycling programs, the City will consider implementation of the following:

- Survey the sectors to identify the reasons for lack of participation.
- Increase incentives.
- Increase access to technical assistance.
- Increase appropriate education and promotional activities.

If markets and end-users prove inadequate, the City will consider implementation of the following:

- Evaluate ability of composted and processed materials to meet buyer specifications. Revise collection and processing as needed.

- Perform a market survey to determine problems with, or constraints to marketing and using recovered materials.
- Investigate cost effectiveness of end-use alternative.
- Explore alternative markets and end-uses.
- Increase market outreach, education, promotion, and advertising.
- Investigate marketing and coordination with other jurisdictions to improve material saleability.

If some aspect of the composting program does not meet local, state, or federal regulations, the City will consider implementing the following:

- Identify problem areas.
- Correct problems to meet local, state, and federal regulations, as appropriate.

**TABLE 6-12
COMPOSTING PROGRAM IMPLEMENTATION SCHEDULE**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs	
				Public	Private
Curbside Collection Program	Recycling Coordinator Public Services Dept. Planning Commission City Manager City Council	Develop baseline data for Composting program	1994	\$3,000	Per year
		Begin local market development activities	1995	\$2,000	
		Begin Public education Campaign	1996	To be Determined	
		Begin Collection of green & yard waste	1997	To be Determined	
		Begin using compost on City areas.	1997	To be Determined	
Centralized Waste Processing Program	Recycling Coordinator Public Services Dept. Planning Commission Planning Dept. City Manager City Council MRF Operator	Develop baseline data for program	1994	\$3,000 per year	
		Begin local market development	1995	\$3,000	
		Begin Public Education Campaign	1996	To be Determined	
		Begin Collection	1997	To be Determined	
		Use compost on City areas.	1997	To be Determined	

**TABLE 6-12
COMPOSTING PROGRAM IMPLEMENTATION SCHEDULE**

Program	Responsible Entity	Tasks	Schedule	Estimated Costs	
				Public	Private
County Owned Processing and Composting Facility	Recycling Coordinator Public Services Dept. Planning Department City Manager City Council Orange County Integrated Waste Management Dept.	Develop baseline data for program	1996	To be Determined	
		Begin local market development	1996	To be Determined	
		Begin Public education Campaign	1997	To be Determined	
		Begin Collection	1997	To be Determined	
		Use compost on City areas.	1998	To be Determined	

* Total costs for medium term (1995-2000) Composting Programs will be further defined in 1995 but are assumed to be shared by County and participating cities in the region through landfill tipping fees.

Section 7

Special Waste Component

City of La Habra
Final Draft

Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

Section 7

Special Waste Component

Overall Value

Final Total

Some Reduction and Recovery Factor

Revised for

General Use Only

SECTION 7 SPECIAL WASTE COMPONENT

7.1 Introduction

(18737)

Special Wastes are generally classified as solid wastes which require special handling, treatment or disposal due to their source of generation, physical, chemical and/or biological characteristics. Although many of these wastes do not enter the waste stream in significant quantities, they are required to be addressed within the SRRE.

Special waste types include, but are not limited to:

- Ash
- Sludge
- Tires
- Asbestos
- Construction and Demolition Debris
- Infectious Wastes
- Marine Wastes
- White Goods
- Auto bodies
- Shredder Waste

White Goods include discarded enamel-coated major appliances, such as washing machines, clothes dryers, hot water heaters, stoves and refrigerators. Although these wastes represent a very small portion of the waste stream, they can often be recycled, repaired, or reused by charitable and non-profit organizations or by commercial recyclers. Some white goods contain polychlorinated biphenyls (PCBs) in the electrical components. Because of this, several of the scrap metal dealers and brokers require that PCB-containing components be removed prior to appliance processing.

Auto bodies typically have not been landfilled due to the market for spare parts, the high demand for ferrous and non-ferrous scrap metals, and the potential danger to landfill equipment operators.

Waste tires and rubber are tires and innertubes that have been removed from the wheel of a vehicle and are no longer suitable for their original intended purpose due to wear, damage, or defect.

Construction and demolition debris wastes include solid wastes from building materials; and packaging and rubble resulting from construction, remodeling, repair and demolition operations on pavement, houses, commercial building, and other structures. Toxic substances such as asbestos, an insulation material that has been determined to be a carcinogen associated with lung cancer, is contained in some construction and demolition wastes. Other hazardous materials that have been found in this waste include lead pipes, PCBs in transformers and capacitors, and toxics in paints and treated lumber.

Infectious wastes include equipment, instruments, utensils and other items of a disposable nature from the rooms of patients who are suspected to or have been diagnosed as having a communicable disease, and must therefore be isolated. Laboratory wastes (including pathological specimens, disposable items, and surgical operating room pathologic specimens) are also included in the infectious waste category.

Asbestos is a fibrous form of various hydrated materials. These materials can pose significant health problems when inhaled. Friable asbestos is a human carcinogen that primarily affects the lungs and is therefore classified as hazardous in California.

Ash is defined as the residue from the combustion of any solid or liquid material.

Sewage sludge is defined as the residual solids and semi-solids resulting from the treatment of water, waste water and/or other liquids. Sludge includes sewage sludge and sludge derived from industrial processes, but does not include effluent discharged from such treatment processes.

7.2 Special Waste Component Goals and Objectives [(187733.1, 18737.1)]

The City has developed specific goals and objectives to be accomplished during the short and medium-term planning periods of the SRRE. These are as follows:

7.2.1 Component Goals

- Develop and implement a special waste program by 1995 that will both meet the needs of the City and comply with the requirements of the California Integrated Waste Management Act of 1989.

- Continue to reduce, in combination with source reduction, recycling, and composting, the amount of special wastes requiring landfill disposal as much as feasible by the year 2000.

Because special wastes are comprised of non-homogenous waste types, specific objectives have been developed to address those wastes which will be targeted within the Special Waste Component.

7.2.2 Short-Term Specific Objectives (1990-1995)

[(18733.1, 18737.1(a))]

7.2.2.1 Tires

- Continue to support the County programs to ban tires from the Bee Canyon Landfill and continue to shred tires at the Olinda Alpha and Prima Deshecha Landfills.
- Continue to promote utilization of retreaded tires on City fleet vehicles where feasible.
- Encourage other organizations to consider utilizing retreaded tires on fleet vehicles.
- By the end of 1991, review and promote revision of bid specifications for road construction within the City to allow consideration of recycled tires as a constituent of road base.
- Research and coordinate with other Southern California agencies regarding a regional tire shredding and tire recycling or transformation facility in support of Assembly Bill 1843 requirements, including the issuance of RFPs.
- Support state program of minimum standards of tire stockpile management by July 1, 1991.

7.2.2.2 Construction/Demolition (C/D) Debris

- Review and promote revision of City bid specifications to allow for greater use of recycled C/D debris in new or renovated road construction.
- Require all C/D waste haulers to recycle a minimum of 10% of the hauled C/D wastes by December 31, 1991 and increase this minimum by 5% per year until 1995.

7.2.2.3 Infectious Waste

- Identify small quantity infectious waste generators by October 1, 1991.
- Support the County landfill load check program starting April 1, 1991 to ensure that all infectious waste loads, including small quantity amounts, have been properly treated to render the infectious waste a solid waste.
- Throughout the short-term planning period, educate the public on the health hazards of improperly disposing of infectious waste and provide examples of proper infectious waste management methods.
- Starting in June 1992, encourage infectious waste generators to use recyclable (e.g., launderable) materials wherever possible.

7.2.2.4 Asbestos

- Beginning in 1991, and every other year thereafter, coordinate with the California Department of Health Services (DHS) regarding progress of asbestos waste treatment alternatives as they relate to asbestos land ban treatment standards.

- Continue to enforce current acceptable method of asbestos management and "treatment" which consists of wetting, bagging or otherwise containing, and landfilling according to specific landfill operation practices.
- Support the Orange County load checking and rejection of asbestos from all landfills not permitted to accept asbestos wastes.

7.2.3 Medium-Term Specific Objectives (1995-2000) [(18733.1, 18737.1(a))]

7.2.3.1 Tires

- Investigate and implement, where feasible, a procurement policy for recycled tire-in-asphalt road construction.

7.2.3.2 C/D Debris

- Continue to require C/D debris to be recycled.

7.2.3.3 Infectious Waste

- Continue existing programs for informing, training, investigating, and enforcing infectious waste management of large and small quantity generators.

7.2.3.4 Asbestos

- Continue monitoring of DHS progress on asbestos waste treatment alternatives.

7.2.4 Targeted Materials [(18733.1, 18737.1(b))]

Based upon the waste characterization studies conducted by the Orange County Integrated Waste Management Department and criteria established by the Integrated Waste Management Act of 1989, Table 7-1 shows the following materials were targeted for Special Waste Programs:

TABLE 7-1
CRITERIA FOR TARGETING MATERIALS

Category	High Volume	High Weight	Hazard Potential	Non Renewable
Infectious Wastes			X	
Tires and Rubber	X			
White Goods	X	X		
Asbestos			X	
Construction/Demolition	X	X		

Legend

1. High volume material (18733.1(b)(1))
2. High weight material (18733.1(b)(1))
3. Hazardous material (18733.1(b)(1))
4. Made from non-renewable resources (18733.1(b)(2))

The waste characterization and diversion study identified construction demolition wastes within the La Habra waste stream as the single largest waste type. With the County allocated tonnages combined with the wastes being landfilled, C/D (inert) wastes accounted for more than 58% of the total generation. As discussed in Section 3, the Waste Diversion Study estimates 69,000 tons per year of C/D wastes in the form of inert wastes were recycled or otherwise diverted from the City waste stream in 1990. Because the City has no method of verifying this 69,000 ton diversion and cannot rely upon this diversion to continue throughout the short and medium-term planning periods, the City has elected to pursue its regulatory recycling and diversion goals without these allocated waste tonnages until such time as they can be verified through future characterization studies or certified records. However, it should be noted that the City intends to increase the diversion of these waste types generated as part of the regular City sidewalk and road maintenance programs from landfilling in both short and medium-term planning periods.

Because the City does not generate sewage sludge, automobile bodies, white goods or incinerator wastes in large quantities, and does not generate marine wastes at all, these wastes have been excluded from current and future special waste programs.

The City of La Habra has determined that tires, C/D debris, infectious waste, and asbestos wastes will be targeted by the City for diversion programs due to their relatively large tonnage, hazard potential, and unique characteristics as compared to other AB 939 special wastes. Additional special wastes may be identified as time and funding allows during the short- and medium-term planning periods.

7.3 Special Waste Component Existing Conditions Description [(18733.2, 18737a(1))]

Each of the six special wastes addressed in this section will be discussed in terms of the existing programs, the quantity of waste generated now, the quantity of waste diverted now, if known, and the future status of the existing programs.

7.3.1 Tires

According to both the Solid Waste Generation Study provided by Orange County Integrated Waste Management Department, and La Habra city records, approximately 716 tons of waste tire and rubber products were generated and disposed in 1990. The Orange County Waste Diversion Study conducted for the City of La Habra states that 502 tons of tires generated within the City were recycled by facilities located within the City and County.

Orange County currently accepts tires at the Prima Deshecha and Olinda/Alpha Landfills at a rate of \$51.25 per ton. Approximately two-thirds of the total tires received at these landfills are disposed of at the Olinda/Alpha Landfill. The remaining one-third is disposed of at the Prima Landfill. Tires are not accepted at the Santiago Canyon and Bee Canyon Landfills. Tires brought to the Prima and Olinda/Alpha Landfills are shredded onsite prior to disposal.

The Orange County Recycling Survey (1989) revealed that a steady market exists for retreaded truck tires; however, it also revealed that no market exists for retreaded passenger tires.

There are four waste tire facilities in Orange County that are currently registered with the CIWMB. Two of the four facilities are located at the Prima Deshecha and Olinda Alpha Landfills. One is a small stockpile of approximately 180 tires in Huntington Beach, and the other is the Defense Re-utilization and Marketing Office at El Toro with no stockpiled tires.

It is likely that some tire generators in La Habra are delivering tires to Oxford Energy in Modesto, California; however, this could not be confirmed. Oxford Energy is the largest tire disposal facility in the country. At Oxford Energy, two incinerators burn whole tires, producing energy, zinc oxide, and fly ash. The plant sells most of the electricity produced to the local utility company.

7.3.1.1 National Programs

Nationwide, there are several private companies developing uses for recycled tires. Some uses include soil amendment, floor mats, asphalt rubber, and composite rubber (Biocycle July 1990). Other uses for whole tires include use in offshore artificial reef development, nonobstructive low cost fencing, and highway retention walls (GSA December 1989). At least one company in California, Oxford Energy Co. near Modesto, has constructed a waste-to-energy plant that uses whole tires as fuel.

7.3.1.2 State Programs

Tire waste management is now regulated in California by a new law, AB 1843. In general, the law requires that the state achieve a 25 percent reduction in landfilled tires within four years of implementation of a state-wide tire recycling program. Waste tire facilities will be required to register and obtain a permit, and a state procurement policy will be written that encourages use of waste tires in recycled products.

7.3.1.3 County Programs

According to the Orange County Integrated Waste Management Department, tires are generated by residents, businesses operating vehicle fleets, and auto repair and wrecking facilities. The Orange County landfills receive an average of 45 tons of tires per day. A 1989 Orange County Recycling Survey (Clements 1989) estimated that 43 tons of tires were diverted per day from landfilling by tire retreaders.

Orange County's role in tire management includes: charging a tire tipping fee, restricting tire land disposal to two landfills, and reducing tire volume by shredding.

7.3.1.4 City Programs

At present, the City of La Habra does not have an official program to specifically divert truck and automobile tires from being landfilled. Instead, the City relies upon private companies to dispose of waste tires.

7.3.1.5 Private Programs

Private sector involvement in tire management is increasing as tire stockpile fires get media attention and federal and state legislation continues to restrict landfilling of tires. The Orange County Recycling Survey (Clements 1989) found that no market exists for retreaded passenger tires, yet a market does exist for retreaded truck tires. The California Highway Patrol does not permit recapped tires to be used on the front of certain vehicles. However, there are some vehicles, such as dump trucks, where recapped tires could be specified for the rear of a vehicle. In December 1989, the Orange County Integrated Waste Management Department (IWMD) issued a request for proposal for a tire shredding and recycling contract and eight companies responded to the proposal of which three were evaluated further. Contract negotiations are underway with the selected contractor. The IWMD will pay the contractor a per ton fee to operate a tire shredding operation at the Olinda/Alpha landfill. The contractor will sell the shredded tires to recyclers and the IWMD will receive a portion of the profit of the tire sales or share the costs with the contractor if transportation costs of shredded tires to the recyclers exceed revenues from the sale of shredded tires.

Four waste tire facilities in Orange County are currently registered with the California Integrated Waste Management Board (CIWMB). Of the four, two are the existing facilities at Prima Deshecha and Olinda Alpha Landfills, one is a small stockpile of approximately 180 tires in Huntington Beach, and the fourth is the Defense Reutilization and Marketing Office--El Toro with zero stockpiled tires (CIWMB August 1990).

7.3.2 Construction/Demolition Debris

7.3.2.1 National Programs

No national programs or specifications for C/D wastes are known to exist.

7.3.2.2 State Programs

No state-wide programs or specifications for C/D wastes are known to exist.

7.3.2.3 County Programs

In Orange County, C/D debris is generated during new residential, commercial, and industrial development throughout the county. C/D debris is also generated in areas of redevelopment and by utility companies excavating in utility right-of-ways. Throughout the County, major road improvements and highway expansions are generating significant quantities of C/D debris.

It is estimated that 1.5 million tons of C/D debris were land disposed in County-operated landfills in 1990. In a recent Orange County Recycling Survey, (Clements 1989), it was estimated that approximately 200,000 tons per month (2.4 million tons/year) were diverted by concrete and asphalt recyclers in 1989.

An unknown quantity of C/D debris is generated in Orange County and disposed in inert landfills or reground and directly reused at road construction sites.

Orange County's role in C/D debris involves hard-to-handle tipping fees and the reuse of certain debris for landfill operations. C/D debris is accepted at Prima and Olinda/Alpha Landfills. Clean dirt, asphalt, and baserock are accepted for landfill operations. If the debris cannot be reused for landfill operations, Orange County charges a hard-to-handle fee of \$5 per ton in addition to the current tip fee of \$17.75 for a total of \$22.75 per ton for disposal (IWMD June 1990).

7.3.2.4 City Programs

The City has no current programs to recycle C/D waste generated from within its jurisdiction.

7.3.2.5 Private Programs

Several private sector concrete and asphalt recyclers are located in Orange County and adjacent counties. Most of the recyclers operate regrind equipment and sell the recycled materials back to construction companies.

7.3.3 Infectious Waste

The Orange County Health Care Agency Environmental Health Division (HCA EHD) estimates that 4,500 tons of infectious waste are generated annually (HCA EHD, 1988-89). This does not include the quantity generated by small generators (small quantity generators are those that generate less than 200 pounds per month). The 4,500 tons per year are required by state law to be incinerated or autoclaved (steam sterilized) prior to landfilling.

Infectious waste in Orange County is regulated by the HCA EHD. The HCA EHD regulates infectious waste generators through inspections, incident investigations, enforcement, public education, and assistance to industry. Orange County regulates approximately 160 generators of infectious waste (HCA EHD, 1988-89). Of these, 11 treat the waste onsite and the rest send the waste to an offsite commercial infectious waste treatment facility. Of the 11 facilities that treat waste onsite, nine use autoclaves and two use incinerators¹. Orange County does not operate treatment facilities.

The offsite treatment facilities used by regulated Orange County infectious waste generators are Thermal Combustion Innovators (TCI), Security Environmental Systems (SES), and Browning-Ferris Industries (BFI) Medical Waste Systems. TCI operates an incinerator and autoclave in Colton, California (Personal Communication TCI, September 1990). SES operates two autoclaves in Vernon, California (Personal Communication SES, September 1990). BFI operates an autoclave in Vernon (Personal Communication BFI, September 1990).

1. Orange County Integrated Waste Management Department SRRE Guidance Manual.

Treated infectious waste may be legally disposed of in the four Orange County landfills, and most onsite treatment facilities dispose of treated waste legally in their solid waste dumpsters. The offsite commercial facilities are not located in Orange County and do not dispose of their treated waste in Orange County landfills.

Until April 1991, small quantity generators (SQGs) may legally dispose of their infectious waste in Orange County landfills without treatment. The quantity contributed by SQGs is unknown. After April 1991, the SQGs must treat the waste prior to landfilling.

Another government agency that has an impact on infectious waste management in Orange County is the California DHS. DHS regulations require the local health officers to enforce the standards and regulations pertaining to the management of infectious waste. Until the recent passage of two Assembly Bills, infectious wastes were considered hazardous in California. In the DHS regulations, infectious waste handling, storage, transportation, treatment, and disposal requirements were defined for specifically listed wastes (22 CCR 66835-66865). When the new bills go into effect, the waste will fall under a new solid waste classification called medical waste.

Medical waste will be regulated by the Environmental Health Division of the DHS instead of the DHS Toxic Substances Control Division. SQGs (less than 200 pounds generated per month) will be required to manage the wastes by incineration or autoclaving. (At the present time, they are currently exempted from this requirement.) SQGs will be required to keep records of the amount of waste generated and the disposal method. These records must be kept by the large quantity generators as well and should be available at the facility for government inspector review. Records other than registration and treatment facility permits information will not have to be submitted to a government agency, unless the government agency specifically requests it.

7.3.4 Asbestos

In 1988, it was estimated that approximately 350 tons of hazardous asbestos wastes were generated in Orange County (CoSWMP, 1989). By comparison, approximately 100,000 tons were disposed in the entire State in 1987 (DHS 1990). BKK Landfill in Los Angeles County is the only landfill in Southern California permitted to accept asbestos waste. An asbestos waste monofill is operating in Northern California, and an out-of-state landfill has

been used by asbestos waste generators.

The quantity of asbestos generated in Orange County is expected to continue in the short and medium terms due to demolition, renovation, and asbestos abatement programs. However, over the long term, the quantity will decrease due to a federal asbestos ban.

7.3.6 Existing Special Waste Facilities

Each of the six special wastes addressed in this section will be discussed regarding regulatory requirements, permits, and documentation for operation.

7.3.6.1 Tires

The State of California has recently passed a law addressing tire management (AB 1843, September 1989). The law, effective January 1, 1990, requires:

- Registration of waste tire facilities by April 1, 1990
- Permitting of waste tire facilities handling greater than 5,000 tires per year by July 1, 1991
- Permitting of facilities handling between 500 and 5,000 tires per year by December 1, 1991
- Establishment of a grants and loans program for shredders and tire recyclers
- Establishment of a state procurement policy for products made of recycled tires
- Fee of 25 cents per tire to be collected by new and used tire dealers starting July 1, 1990, and remitted to the CIWMB.

Retreaders handling less than 3,000 tires are exempt from the law. Permit requirements include fire and vector control plans as well as plans to reduce stockpiled inventories.

The United States Environmental Protection Agency (U.S. EPA) has issued a guideline for the procurement of retread tires. Any federal, State, or local agency using appropriated federal funds is required as of November 17, 1989 (40 Code of Federal Regulations Part

253, 1988) to establish and implement an "affirmative procurement program" for retread tires. The program requires that procuring agencies revise their tire specifications to include retread tires and begin procuring retread tires unless certain limiting factors are applicable.

7.3.6.2 C/D Debris

Recent legislation in California that supports a market for C/D debris (AB 1306, September 1989). The new law requires that the California Department of Transportation modify bid specifications for road base, sub-base, and back-fill materials to include use of recycled materials, without reducing quality of construction, and such that recycled material is competitively priced. Examples of recycled materials include asphalt, concrete, foundry slag, crumb rubber, ash, and glass.

Commercial C/D debris recyclers are not subject to specific regulations, permits, and documentation for operation other than general good neighbor requirements. Operations are subject to local noise ordinances and are required to control dust emissions as part of general nuisance components of local ordinances.

7.3.6.3 Infectious Waste

In California, minimum standards for infectious waste handling, storage, transportation, treatment, and disposal are required by state regulations (22 CCR 66835-66865). Similar standards were recently enacted in AB 1641 (November, 1990). Incinerators are required to obtain air quality permits. Recent legislation requires that air pollution control be retrofitted on incinerators greater than 25 tons per year to reduce uncontrolled dioxin emission by 99 percent. Smaller incinerators do not have to retrofit with air pollution controls, but have to follow good operating practice and certify that operators are trained.

Autoclaves are required to comply with Occupational Safety and Health Administration (OSHA) standards for employee safety. Storage facilities must keep records of storage temperatures. Treatment facilities must keep records of treatment temperatures and residence times. Large quantity generators are required to keep records of quantities of wastes treated onsite, but are not required to send the information to a government agency.

7.3.6.4 Asbestos

In California, a distinction is made between nonhazardous and hazardous waste asbestos. Class I, Class II, and Class III landfills can accept both types of asbestos if the Regional Water Quality Control Board (RWQCB) specifically states it is allowed in the landfill permit. In Orange County, none of the four Class III landfills accept asbestos waste (IWMD June 1990), therefore, asbestos is landfilled outside of County boundaries. Records of hazardous waste asbestos quantities are available on DHS manifests, but records of nonhazardous waste quantities are not currently available.

In California, asbestos with greater than one percent friable quantity is considered hazardous and must be handled, transported, and disposed using minimum standards described in federal regulations (40 Code of Federal Regulations Part 61 Subpart M). These minimum standards include a wetting and containment requirement to mitigate the impact of airborne fiber effects on humans. The DHS states that containment and wetting to minimize the release of asbestos fibers is best demonstrated available technology and is acceptable as a treatment prior to landfilling (DHS 1990). The DHS is also monitoring the progress of two technologies that may be amenable to treating asbestos waste: vitrification and cementitious solidification (DHS 1989).

Landfills that accept asbestos must dispose of the asbestos in a separate portion of the landfill marked by adequate warning signs. At the end of every day, at least six inches of clean soil must be used to cover the disposed asbestos. At landfill closure, at least 30 inches of compacted clean soil must be placed on top of the last 6-inch layer of clean soil for a total final cover of 36 inches.

Approximate estimates of future asbestos waste from type of abatement activity can be obtained from the California General Services Agency Office of Local Assistance. This agency collects asbestos abatement reports required from school districts under the federal 1986 Asbestos Hazard Emergency Response Act. These reports include an estimate of the quantity of asbestos located in schools and include a plan to abate the asbestos hazard in each school.

The federal government recently passed a ban on the manufacture, importation, processing, and distribution of asbestos. The ban is a phased procedure and distribution will be banned by the year 1997. Asbestos treatment technology vendors, such as

solidification and vitrification processors, are currently analyzing this ban in relation to California laws and permitting requirements for hazardous waste treatment facilities. If the treatment facilities have to apply for California hazardous waste treatment permits, vendors may not offer treatment in California.

In July 1989, the federal government passed a law that bans the manufacturing, importation, processing, and distribution in commerce of asbestos in almost all products over staged intervals. For manufacturing, importation, and processing, the ban will be conducted in three stages over August 1990, August 1993, and August 1996. The distribution in commerce ban will be conducted in three stages over August 1992, August 1994, and August 1997 (DHS 1989).

7.4 Identification of Alternative Recycling Programs

[(18733.4(a))]

The following special wastes have been targeted for potential development of diversion and recycling programs:

- Tires and rubber
- Construction and demolition debris
- Infectious wastes
- Asbestos

As previously stated ash, sewage, sludge, industrial sludge, asbestos, shredder waste (generated from white goods and autos), and auto bodies were not considered further for diversion due to small quantities or lack of actual generation within La Habra (see Section 7.3). Asbestos hazard minimization will be addressed in Section 7.4.1.4

7.4.1 Identification of Alternatives

The following paragraphs identify and provide a brief description of alternatives for special waste management.

7.4.1.1 Tires

Four tire management alternatives may be implemented to divert tires from landfilling or reduce tire disposal hazards. These alternatives are:

- Transformation technologies such as pyrolysis, incineration, and processing into refuse-derived fuel (RDF)
- Shredding and recycling
- Reuse as a retread tire or another use as a whole tire
- Shredding and landfilling

Pyrolysis is a waste-to-energy alternative that applies to the controlled oxygen-free or starved oxygen heating of scrap tires to produce various gaseous, liquid, and solid charcoal-like fuel products. Shredded tires are the most suitable for this alternative; however, whole tires have been tried in some pyrolysis experiments.

Incineration is a waste-to-energy alternative that applies to the controlled combustion of tires. The heat generated from combustion may be used to produce steam for steam heating or for the production of electricity. Shredded tires are most suitable for this process; however, there are examples of incinerators that burn whole tires.

Refuse-derived fuel (RDF), or tire-derived fuel (TDF), is a waste to energy alternative that provides a more refined tire fuel than that used in pyrolysis or the incineration alternative described above. TDF typically consists of tires shredded to one- to two-inch squares. The metal and textile layers of the tire are removed by mechanical means and the remaining rubber square with a high heating value is easily transportable to an incinerator, cement kiln, or boiler combustion application adapted to accept TDF.

Tire shredding for the purpose of recycling in manufacturing and agricultural uses is another alternative that diverts the tire from landfilling. Experiments have shown that tires shredded to very small pieces have been used successfully as soil amendment for growing crops because the tire pieces improve soil aeration properties.

Another means of recycling a tire without shredding is to make crumb rubber. Crumb rubber processing and recycling consists of reducing whole tires to small, manageable pieces that can be sold to recyclers that incorporate the recycled tire in new products. The tire pieces can be produced by cryogenics (freezing temperatures) or grinding. Both methods break the tire into small pieces and separate the rubber from the metal and textile portions of the tire. The rubber can be recycled into asphalt rubber (roofing material, liners, pavement underlayers) or composite products (flooring and automotive rubber).

Tire retreading is another tire reuse alternative. Passenger tires are not typically retreaded in Orange County; however, truck tires are. The California Highway Patrol prohibits use of recap tires on the front of some vehicles.

Direct reuse of whole tires has been practiced for various applications. Whole tires can be used for the following:

- Playground equipment for children in schools or parks
- Dock bumpers, agricultural equipment bumpers
- Offshore artificial reefs
- Non-obstructive low-cost fencing
- Highway retaining walls

Tire shredding and landfilling reduces the problem of whole tires "floating" to the surface of the landfill and reduces the volume of material landfilled. Tire shredding and landfilling is preferable to tire stockpiling because it does not have the hazards associated with fires and vectors.

7.4.1.2 C/D Debris

Alternatives for reducing C/D debris disposed to landfills include providing a consistent demand for C/D debris in new construction applications; constructing a regional recycling facility that would handle numerous types of waste such as concrete, asphalt, wood, glass, and ash; or supporting the private sector in construction or expansion of similar recycling facilities. The regional recycling facility can be operated by the government or by the private sector for the government.

An increase in C/D debris tip fees will encourage generators to recycle rather than landfill and a ban on C/D debris landfilling could be enforced if adequate recycling capacity was available in the County or regional area.

The County Environmental Management Agency (EMA) Public Works will review and revise bid specifications to encourage the maximum use of recycled materials in accordance with AB 1306. Additionally, the City will review and revise bid specifications to encourage its maximum use of recycled materials.

7.4.1.3 Infectious Waste

Alternatives for reducing the tonnage of infectious waste disposed to landfills include increased use of incineration as an infectious waste treatment method. Incineration can reduce waste quantity by up to 95 weight percent. However, the new air pollution control requirements for incinerators may be a disincentive for incinerators to expand or develop new facilities.

One other alternative currently practiced to reduce the hazard of infectious waste is autoclaving.

To further reduce the hazard of infectious waste disposed in Orange County landfills, the County could implement the newly required small quantity generator program similar to the existing large quantity generator program and enforce the DHS requirements of recordkeeping of quantities generated and quantity and method of material treated and disposed.

Source reduction of infectious waste could include a better segregation of infectious waste from solid waste at the source, and the use of recyclable (e.g., launderable) materials.

7.4.1.4 Asbestos

Currently, the DHS recognizes containment and wetting as the best demonstrated available technology for asbestos waste management. Future alternatives for treating asbestos could include solidification and vitrification. Solidification is the mixing of asbestos with cement to immobilize the asbestos fibers and therefore reduce their health hazard to humans. Vitrification is a process where asbestos fibers are mixed with additives, melted at very high

temperatures, and cooled to form a glass-like product. Currently there are no commercial facilities in California that solidify or vitrify asbestos, therefore, it is recommended that the County support containment and wetting and monitor the DHS progress on alternative treatment technologies.

7.5 Evaluation of Alternative Special Waste Component Programs [(18733.3)]

The following sections discuss evaluations of the selected alternative Special Waste Component Programs. Unlike other evaluations within the SRRE, each potential special waste program is evaluated individually because of the diversity of alternatives available for recycling, source reduction and treatment.

7.5.1 Tire Reuse

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Tire reuse represents an effective method to divert discarded tires from landfills. However, tires destined for retreading must first be in good condition which equates to approximately 10% of discarded tires. Other reuse possibilities exist; however, their long term demand cannot be assured.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from tire reuse programs.

System Flexibility (18733.3(a)(3)): Tire reuse programs can be considered highly flexible due to the ability of the programs to accommodate nearly any amount of acceptable tires that can be diverted.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Tire reuse programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage individuals to generate less waste tires.

Ability to be Implemented (18733.3(a)(5)): Tire reuse programs could easily be implemented within the short-term planning period and do not require the purchase of special equipment or construction of new facilities.

Acceptability by Public Sector: Tire reuse programs are considered to be highly acceptable by the public sector.

Acceptability by Private Sector: programs are considered to be highly acceptable by the private sector.

New or Expanded Facility Requirements (18733.3(a)(6)): Tire reuse programs are not anticipated to require the construction of new, or expansion of existing facilities.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Tire Reuse programs are consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Tire reuse programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Tire reuse programs are unknown at this time.

Availability of Markets (18733.3(b)(4)): Current markets for tire reuse are low and are not expected to increase dramatically in the near future.

TABLE 7-2
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Tire Reuse

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	4	22	88
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	9	3	27
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	10	2	20
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	4	3	12
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	9	8	72
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available	7	12	84
Total						98	100	733

7.5.2 Tire Shredding and Recycling

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Tire shredding and recycling represents an effective method to divert discarded tires from landfills.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from tire shredding and recycling programs.

System Flexibility (18733.3(a)(3)): Tire shredding and recycling programs can be considered highly flexible due to the ability of the programs to accommodate nearly any amount of acceptable tires that can be diverted.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Tire shredding and recycling programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage reduction in generation.

Ability to be Implemented (18733.3(a)(5)): Tire shredding and recycling programs could be implemented within the short-term planning period; however, they could require the purchase of special equipment, or construction of new facilities.

Acceptability by Public Sector: Tire shredding and recycling programs are considered to be highly acceptable by the public sector.

Acceptability by Private Sector: Tire shredding and recycling programs are considered to be highly acceptable by the private sector.

New or Expanded Facility Requirements (18733.3(a)(6)): Tire shredding and recycling programs are not anticipated to require the construction of new, or expansion of existing facilities.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Tire shredding and recycling programs are consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Tire shredding and recycling programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Tire shredding and recycling programs are unknown at this time.

Availability of Markets (18733.3(b)(4)): Current markets for shredded tires are not considered high and are not expected to increase dramatically in the near future.

TABLE 7-3
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION
City of La Habra

Tires - Shredding and Recycling

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	8	22	176
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	8	3	24
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	5	2	10
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	10	3	30
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	5	4	20
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	5	28	140
Availability of Markets	Very Limited		Moderately Limited		Readily Available	7	12	84
Total						96	100	736

7.5.3 Tire Shredding and Landfilling

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Tire shredding and landfilling would have no diversion potential as all tire remains are anticipated to be landfilled.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from tire shredding and landfilling programs as they are currently ongoing at several landfills.

System Flexibility (18733.3(a)(3)): Tire shredding and landfilling programs can be considered highly flexible due to the ability of the programs to accommodate nearly any amount of tires that can be delivered.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Tire shredding and landfilling programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage reduction in generation.

Ability to be Implemented (18733.3(a)(5)): Tire shredding and landfilling programs could be implemented within the short-term planning period.

Acceptability by Public Sector: Tire shredding and landfilling programs are considered to be highly acceptable by the public sector.

Acceptability by Private Sector: Tire shredding and landfilling programs are considered to be highly acceptable by the private sector.

New or Expanded Facility Requirements (18733.3(a)(6)): Tire shredding and landfilling programs are not anticipated to require the construction of new, or expansion of existing facilities.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Tire shredding and landfilling programs are consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Tire shredding and landfilling programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Tire shredding and landfilling is expected to cost approximately \$51.25/ton.

Availability of Markets (18733.3(b)(4)): Markets for shredded and landfilled tires is not applicable.

TABLE 7-4
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Tires – Shredding and Landfilling

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	0	22	0
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	10	3	30
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	10	2	20
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	8	4	32
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	9	2	18
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	8	4	32
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	6	28	168
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						86	100	515

7.5.4 Tire Transformation

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Tire transformation offers no potential diversion until the medium-term planning period.

Potential Environmental Impacts (18733.3(a)(2)): Moderate environmental impacts are expected from tire transformation.

System Flexibility (18733.3(a)(3)): Tire transformation programs can be considered highly flexible due to the ability of the programs to accommodate nearly any amount of tires that can be delivered.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Tire transformation programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage reduction in generation.

Ability to be Implemented (18733.3(a)(5)): Tire transformation programs could be implemented within the short-term planning period.

Acceptability by Public Sector: Tire transformation programs are not considered to be an acceptable means of reuse or reduction of wastes by the public sector due to concerns over emissions.

Acceptability by Private Sector: Tire transformation programs are considered to be moderately acceptable by the private sector due to potential increased processing costs.

New or Expanded Facility Requirements (18733.3(a)(6)): Tire transformation programs are anticipated to require the construction of extensive new.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Tire transformation programs are consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Tire transformation programs are expected to have moderate institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Tire transformation is unknown at this time.

Availability of Markets (18733.3(b)(4)): Markets for tire transformation (i.e., electricity) is expected to remain moderate.

TABLE 7-5
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Tire Transformation

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	0	22	0
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	1	2	2
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	1	3	3
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	4	7	28
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	1	5	5
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	5	8	40
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	1	4	4
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	4	2	8
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	4	4	16
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	1	28	28
Availability of Markets	Very Limited		Moderately Limited		Readily Available	4	12	48
Total						30	100	194

7.5.5 C/D Debris Private Facility

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Private C/D facilities offer a good potential diversion opportunity based upon existing facilities within the area.

Potential Environmental Impacts (18733.3(a)(2)): No significant environmental impacts are associated with this alternative..

System Flexibility (18733.3(a)(3)): Private C/D facilities are considered to be extremely flexible in that they can accommodate several types of C/D wastes and nearly any amount of C/D waste that can be delivered.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Private C/D programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage reduction in generation.

Ability to be Implemented (18733.3(a)(5)): Private C/D programs could be implemented within the short-term planning period as several facilities exist within the area.

Acceptability by Public Sector: Private C/D facilities programs are considered to be highly acceptable by the public sector.

Acceptability by Private Sector: Private C/D facilities programs are considered to be highly acceptable by the private sector.

New or Expanded Facility Requirements (18733.3(a)(6)): No new facilities are anticipated to be needed for this program.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Private C/D facilities appear to be consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): No institutional barriers are anticipated for existing facilities.

Total Implementation Costs (18733.3(b)(3)): Private C/D facilities are currently operating within the area at \$33/ton.

Availability of Markets (18733.3(b)(4)): Markets for C/D debris wastes that have been recycled is anticipated to remain high as long as construction of road and buildings continue.

TABLE 7-6
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

C/D Debris – Private Facilities

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	10	22	220
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	5	2	10
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	4	3	12
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	9	7	63
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	9	5	45
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	10	8	80
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	5	4	20
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	6	4	24
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	4	28	112
Availability of Markets	Very Limited		Moderately Limited		Readily Available	8	12	96
Total						85	100	717

7.5.6 Public C/D Debris Facilities

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Public C/D facilities represent a potentially effective method to divert large amounts of C/D wastes from landfills.

Potential Environmental Impacts (18733.3(a)(2)): Moderate environmental impacts are anticipated from public C/D facilities if new facilities are necessary.

System Flexibility (18733.3(a)(3)): Public C/D facilities can be considered highly flexible due to the ability of the facilities to accommodate nearly any amount of acceptable C/D wastes that can be diverted.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Few changes in waste type are anticipated from the development of this program as the facilities do not appear to have any impact upon changes in waste types since they offer no incentives to encourage individuals to generate less C/D waste.

Ability to be Implemented (18733.3(a)(5)): Public C/D Facilities would be difficult to site within the short-term planning period because of the environmental constraints and anticipated expense.

Acceptability by Public Sector: Public C/D facilities are considered to have a low public sector acceptability because of presumed start up and construction costs.

Acceptability by Private Sector: Public C/D facilities are not anticipated to be accepted by the private sector because they would compete with existing private sector facilities.

New or Expanded Facility Requirements (18733.3(a)(6)): Public C/D facilities would require new facilities as no public facilities of this type currently exist within the area.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Public C/D facilities are assumed to be consistent with local plans, policies, and ordinances providing the proper land use types (industrial) are available.

Potential Institutional Barriers (18733.3(b)(2)): Public C/D facilities can expect to compete with existing private facilities and therefore represent significant institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Development of a public C/D facility is expected to cost in excess of \$2 million for land and equipment. Additionally, the equipment necessary to provide daily operations typically requires high maintenance costs.

Availability of Markets (18733.3(b)(4)): Current markets for C/D wastes that have been recycled is high and is anticipated to remain so for the short and medium-term planning periods.

TABLE 7-7
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

C/D - Public Facilities

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	10	22	220
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	5	2	10
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	4	3	12
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	6	7	42
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	3	5	15
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	1	8	8
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	1	4	4
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	6	4	24
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	4	28	112
Availability of Markets	Very Limited		Moderately Limited		Readily Available	8	12	96
Total						63	100	578

7.5.7 Source Reduction of Infectious Waste

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Source reduction of infectious waste represents the only effective method to divert this waste type from landfills.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from source reduction of infectious waste programs.

System Flexibility (18733.3(a)(3)): Source reduction of infectious waste can be considered highly flexible due to the ability of generators to rapidly accommodate changing medical technologies.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Source reduction of infectious waste programs are anticipated to have a significant impact upon the medical waste stream as these source reduced wastes would be expected to be replaced with non-disposable products.

Ability to be Implemented (18733.3(a)(5)): Source reduction of infectious waste could be implemented within the short-term planning period with the cooperation of the generators.

Acceptability by Public Sector: Source reduction of infectious waste programs are considered to be highly acceptable by the public sector.

Acceptability by Private Sector: Source reduction of infectious waste programs are considered to have a moderate acceptability by the private sector because of increased purchasing and training costs.

New or Expanded Facility Requirements (18733.3(a)(6)): Source reduction of infectious waste are not anticipated to require the construction of new, or expansion of existing facilities.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Source reduction of infectious waste are considered to be extremely consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Source reduction of infectious waste programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Implementation costs for source reduction of infectious wastes are difficult to estimate due to the large number of products that could be effectively eliminated from the waste stream.

Availability of Markets (18733.3(b)(4)): Not applicable.

TABLE 7-8
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Infectious Waste - Source Reduction

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	4	22	88
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	9	3	27
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	9	2	18
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	5	8	40
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	9	4	36
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	6	28	168
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						85	100	562

7.5.8 Infectious Waste Incineration

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Infectious waste incineration offers little potential waste diversion until the medium-term planning period. Additionally, the relatively small quantities of this special waste type generated will not affect the diversion goals of AB 939.

Potential Environmental Impacts (18733.3(a)(2)): Impacts from infectious waste incineration could impact the sensitive air quality basin if conducted onsite or locally.

System Flexibility (18733.3(a)(3)): Infectious waste incineration can be considered very flexible due to the ability of the programs to accommodate changing medical technologies.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Infectious waste incineration programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage generators to produce less waste.

Ability to be Implemented (18733.3(a)(5)): Infectious waste incineration could be implemented within the short-term planning period.

Acceptability by Public Sector: Infectious waste incineration programs are considered to have a high public sector acceptability as long as new incinerators do not have to be constructed.

Acceptability by Private Sector: Incineration of infectious waste is considered to be highly acceptable by the private sector.

New or Expanded Facility Requirements (18733.3(a)(6)): Infectious waste incineration programs would require the construction of new, or expansion of existing facilities if the wastes are not source reduced first.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Infectious waste incineration is consistent with local plans, policies, and ordinances, and is legally required for some types of infectious wastes.

Potential Institutional Barriers (18733.3(b)(2)): Infectious waste incineration could be impacted by institutional barriers associated with South Coast Air Quality Management District (SCAQMD) standards.

Total Implementation Costs (18733.3(b)(3)): Implementation costs of infectious waste incineration are considered to be high due to permitting and testing requirements of air emissions.

Availability of Markets (18733.3(b)(4)): Not applicable.

TABLE 7-9
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Infectious Waste Incineration

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	3	22	66
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	4	2	8
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	10	4	40
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	8	28	224
Availability of Markets	Very Limited		Moderately Limited		Readily Available	8	12	96
Total						89	100	693

7.5.9 Infectious Waste Autoclaving

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Although infectious waste autoclaving renders the wastes nonhazardous, the waste still requires landfilling for disposal.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from infectious waste autoclaving programs.

System Flexibility (18733.3(a)(3)): Infectious waste autoclaving can be considered moderately flexible due to its ability to accommodate several types of waste.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Infectious waste autoclaving programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage generators to produce less waste.

Ability to be Implemented (18733.3(a)(5)): Infectious waste autoclaving programs could be implemented within the short-term planning period and do not require the purchase of special equipment, or construction of new facilities for the existing anticipated waste stream.

Acceptability by Public Sector: Autoclaving of infectious waste programs are considered to be highly acceptable by the public sector as a safe means of rendering the wastes inert

Acceptability by Private Sector: Autoclaving of infectious waste is expected to be moderately acceptable by the private sector because of increased costs.

New or Expanded Facility Requirements (18733.3(a)(6)): Infectious waste autoclaving programs are not anticipated to require the construction of new, or expansion of existing facilities.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Infectious waste autoclaving programs are considered to be consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Infectious waste autoclaving programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Infectious waste autoclaving programs are estimated to cost an average of \$3,960/ton.

Availability of Markets (18733.3(b)(4)): There are no known markets for autoclaved infectious wastes.

TABLE 7-10
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Infectious Waste - Autoclaving

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	0	22	0
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	6	3	18
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	4	2	8
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	4	3	12
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	5	8	40
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	8	4	32
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	9	4	36
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	1	28	28
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						65	100	304

7.5.10 Infectious Waste Landfilling

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Infectious waste landfilling affords no potential diversion for this waste type.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from infectious waste landfilling programs. However, potential impacts of exposure to landfill personnel should also be considered.

System Flexibility (18733.3(a)(3)): Infectious waste landfilling can be considered highly flexible due to its ability to accommodate several types of waste.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Infectious waste landfilling programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage generators to produce less waste.

Ability to be Implemented (18733.3(a)(5)): Infectious waste landfilling programs could be implemented within the short-term planning period and do not require the purchase of special equipment, or construction of new facilities for the existing anticipated waste stream.

Acceptability by Public Sector: Landfilling of infectious waste is considered to be highly unacceptable by the public sector because of potential environmental concerns.

Acceptability by Private Sector: Landfilling of Infectious waste is considered to be highly acceptable by the private sector because of reduced costs

New or Expanded Facility Requirements (18733.3(a)(6)): Infectious waste landfilling programs are not anticipated to require the construction of new, or expansion of existing facilities.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Infectious waste landfilling programs are considered to be consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Infectious waste landfilling programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Infectious waste landfilling is estimated to cost an average of \$250/ton.

Availability of Markets (18733.3(b)(4)): Not applicable.

TABLE 7-11
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Infectious Waste – Landfilling

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	5	22	110
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	7	2	14
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	7	7	49
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	1	5	5
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	6	8	48
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	8	4	32
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	5	4	20
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	5	28	140
Availability of Markets	Very Limited		Moderately Limited		Readily Available	9	12	108
Total						73	100	576

7.5.11 Asbestos Waste Landfilling

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Asbestos waste landfilling affords no potential diversion for this waste type.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from asbestos waste landfilling programs. However, potential impacts of exposure to landfill personnel should also be considered.

System Flexibility (18733.3(a)(3)): Asbestos waste landfilling can be considered highly flexible due to its ability to accommodate several types of waste.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Asbestos waste landfilling programs are not anticipated to have any impact upon changes in waste type since they offer no incentives to encourage generators to produce less waste.

Ability to be Implemented (18733.3(a)(5)): Asbestos waste landfilling programs could be implemented within the short-term planning period.

Acceptability by Public Sector: Asbestos waste landfilling is considered to be highly unacceptable by the public sector because of potential environmental concerns.

Acceptability by Private Sector: Asbestos waste landfilling is considered to be moderately acceptable by the private sector.

New or Expanded Facility Requirements (18733.3(a)(6)): Asbestos waste landfilling programs are not anticipated to require the purchase of special equipment, or construction of new facilities for the existing anticipated waste stream.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Asbestos waste landfilling programs are considered to be consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Asbestos waste landfilling programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Asbestos waste landfilling is estimated to cost an average of \$250/ton.

Availability of Markets (18733.3(b)(4)): Not applicable.

TABLE 7-12
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Asbestos Waste – Landfilling

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	0	22	0
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	8	3	24
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	9	2	18
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	5	3	15
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	10	7	70
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	7	5	35
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	7	8	56
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	10	4	40
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	10	2	20
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	10	4	40
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	4	28	112
Availability of Markets	Very Limited		Moderately Limited		Readily Available	0	12	0
Total						80	100	430

7.5.12 Asbestos Waste Vitrification

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Asbestos waste vitrification affords no potential diversion for this waste type.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from asbestos waste vitrification programs. However, potential impacts of exposure to landfill personnel should also be considered.

System Flexibility (18733.3(a)(3)): Asbestos waste vitrification can be considered somewhat inflexible due to its lack of ability to be expanded and lack of existing markets.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Asbestos waste vitrification programs are not anticipated to have any impact upon changes in waste type since they offer no incentives to encourage generators to produce less waste.

Ability to be Implemented (18733.3(a)(5)): Asbestos waste vitrification programs could be implemented within the medium-term planning period.

Acceptability by Public Sector: Asbestos waste vitrification programs are considered to be highly acceptable by the public sector as a safe means of disposal..

Acceptability by Private Sector: Asbestos waste vitrification programs are considered to be highly unacceptable by the public sector because of increased costs for handling and disposal.

New or Expanded Facility Requirements (18733.3(a)(6)): Asbestos waste vitrification programs are anticipated to require the purchase of special equipment, and/or construction of new facilities for the small existing waste stream.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Asbestos waste vitrification programs are considered to be consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Asbestos waste vitrification programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Asbestos waste vitrification is estimated to cost an average of \$90-125/ton.

Availability of Markets (18733.3(b)(4)): Not applicable.

TABLE 7-13
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Asbestos Waste - Vitrification

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	2	22	44
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	4	3	12
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	2	2	4
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	6	3	18
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	5	7	35
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	8	5	40
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	2	8	16
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	0	4	0
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	5	2	10
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	3	4	12
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	1	28	28
Availability of Markets	Very Limited		Moderately Limited		Readily Available	2	12	24
Total						40	100	243

7.5.13 Asbestos Waste Solidification

[18736.3(a)]

Waste Diversion Potential (18733.3(a)(1)): Asbestos waste solidification affords no potential landfill diversion for this waste type.

Potential Environmental Impacts (18733.3(a)(2)): Minimal potential environmental impacts are expected from asbestos waste solidification programs.

System Flexibility (18733.3(a)(3)): Asbestos waste solidification can be considered somewhat inflexible due to its lack of ability to be expanded and lack of existing markets.

Changes in Waste-Type Generation or Use (18733.3(a)(4)): Asbestos waste solidification programs are not anticipated to have any impact upon changes in waste types since they offer no incentives to encourage generators to produce less waste.

Ability to be Implemented (18733.3(a)(5)): Asbestos waste solidification programs could be implemented within the medium-term planning period.

Acceptability by Public Sector: Asbestos waste solidification programs are considered to be highly acceptable by the public sector as a safe means of disposal..

Acceptability by Private Sector: Asbestos waste solidification programs are considered to be highly unacceptable by the public sector because of increased costs for handling and disposal.

New or Expanded Facility Requirements (18733.3(a)(6)): Asbestos waste solidification programs are anticipated to require the purchase of special equipment, and/or construction of new facilities for the small existing waste stream.

Consistency with Local Plans, Policies, and Ordinances (18733.3(b)(1)): Asbestos waste solidification programs are considered to be consistent with local plans, policies, and ordinances.

Potential Institutional Barriers (18733.3(b)(2)): Asbestos waste solidification programs are not expected to have any potential institutional barriers.

Total Implementation Costs (18733.3(b)(3)): Asbestos waste solidification is estimated to cost an average of \$125/ton.

Availability of Markets (18733.3(b)(4)): Not applicable.

TABLE 7-14
SPECIAL WASTE COMPONENT
PROGRAM EVALUATION

City of La Habra

Asbestos Waste – Solidification

Criteria	0 - 1	2 - 3	4 - 6	7 - 8	9 - 10	Points	Weight	Total
Waste Reduction Effectiveness	Very Low	Low	Moderate	High	Very High	2	22	44
Potential Environmental Impacts	Significant Impacts	Major Impacts	Moderate Impacts	Minor Impacts	No Impacts	5	3	15
System Flexibility	Completely Unflexible	Somewhat Unflexible	Moderate	Somewhat Flexible	Very Flexible	4	2	8
Changes in Waste-Type Generation or Use	Major Negative	Some Negative	No Changes	Some Positive	Major Positive	8	3	24
Ability to be Implemented (Short and Medium-Term)	Very Low	Low	Moderate	High	Very High	5	7	35
Acceptability by Public Sector	Very Low	Low	Moderate	High	Very High	10	5	50
Acceptability by Private Sector	Very Low	Low	Moderate	High	Very High	3	8	24
New or Expanded Facility Requirements	Extensive	Major	Moderate	Minor	None	0	4	0
Consistency with Local Plans Policies, and Ordinances	Completely Inconsistent		Somewhat Consistent		Completely Consistent	5	2	10
Potential Institutional Barriers	Very High	High	Moderate	Low	Very Low	3	4	12
Total Implementation Costs	Very High	High	Moderate	Low	Very Low	3	28	84
Availability of Markets	Very Limited		Moderately Limited		Readily Available	2	12	24
Total						50	100	330

**TABLE 7-15
PROGRAM EVALUATION SUMMARY**

Program	Total Score
Tires	
Shred/Recycle	736
Reuse	733
Shred/Landfill	515
Transformation	194
Construction/Demolition Debris	
Private Facilities	717
Public facilities	578
Infectious Waste	
Incineration	693
Landfilling	576
Source Reduction	562
Autoclaving	304
Asbestos Waste	
Landfilling	430
Solidification	330
Vitrification	243

7.6 Selection of Special Waste Programs

[(18733.4)]

Since no characterization or generation studies were conducted to address infectious and asbestos wastes, the utilization of generation and characterization data for program selection is not applicable. The City of La Habra has selected the following Special Waste

Programs based upon their assumed hazard potential, volume, local applicability, and consistency with the Orange County stated goals and objectives.

- Tire Shredding and Recycling
- C/D Debris Private Facilities
- Infectious Waste Incineration
- Asbestos Waste Landfilling

7.6.1 Selected Alternatives

[(18733.4(a))]

The selection of the special waste program for each special waste is discussed below. Each discussion contains: a description of the selected program with justification for selection, the quantities of waste to be diverted, identification of end-users, methods for handling materials, and facility needs.

7.6.1.1 Tires

The selected short term tire alternative is the burning of tires for fuel². In December, 1989, the Orange County IWMD issued a Request for Proposals for a tire shredding and recycling contract. A contractor who will transport whole tires from the landfills to a tire burning facility has been selected and contract negotiations are underway. It is the intent of the County that the contractor will manage all of the waste tires at the Olinda/Alpha and Prima Deshecha Landfills. Tires will continue to be transported to the Olinda/Alpha Landfill by current hauler transportation methods. At the landfill, the tires will be collected whole by the contractor for a fee charged to the County IWMD. The tire diversion program is scheduled to begin in May, 1991.

The tires will be transported to Moapa, Nevada where they will be burned as fuel. This is compatible with the limitation that burning of tires for fuel must be undertaken outside of "critical air basins" (this requirement renders infeasible any tire burning for fuel in the South Coast Air Quality Basin).

Note that waste tire facilities will be required to register and obtain a permit as the new law, AB 1843, is enforced. The Olinda/Alpha and Prima Deshecha landfills are two of

² Regional approach - Correspondence from Orange County Integrated Waste Management Department May 13, 1991.

only four waste tire facilities currently registered with the CIWMB.

The selection of tire alternatives for the medium term planning periods will be influenced by the current State and Federal legislation and new laws governing waste tires. Burning of tires will be supplemented and possibly supplanted by tire shredding into feedstock for end-uses such at:

Shredded tires will be sold to the following end-users:

- þ Operators of waste-to-energy facilities for use as fuel
- þ Manufacturers of floor mats
- þ Asphalt pavement contractors

In addition to tire shredding and recycling, tire reuse will be increased through a tire reuse public education program, use of the U.S. EPA guidelines for procurement of retread tires (40 CFR Part 253, 1988), establishment of a Stated procurement policy for products made of recycled tires (AB 1843, 1989).

7.6.1.2 C/D Debris

The selected alternative for C/D debris management is a combination of administrative policy changes such as raising tip fees for disposal of C/D debris (higher than that charged by a private sector C/D debris recycler) and requiring city and County-funded projects to comply with the State Department of Transportation C/D debris procurement policy. Orange County will also promote use of private sector recyclers through public education fliers or other educational promotions. The County will also follow the progress of C/D debris recycling projects that emphasize end-use markets, such as those funded in Rhode Island, New York, Connecticut, and Vermont.

The quantities of waste to be diverted include those currently diverted plus those diverted through increased use of materials in road-base construction projects. End-users would be construction companies purchasing materials for construction projects. Methods for handling materials would be standard operating methods currently used by private recyclers. Facility needs would be those currently used by private recyclers.

7.6.1.3 Infectious Waste

Because infectious waste cannot be recycled and source reduction will only reduce wastes a small amount, the selected infectious waste management alternative is to continue to support the incineration and autoclaving of onsite and offsite treatment facilities and require that records of waste generation and treatment be kept onsite for review by County health inspectors. Improved waste segregation and possible return to recyclable (e.g., launderable) materials instead of disposable materials would reduce infectious waste at the source, but would not reduce it significantly.

The quantities of waste diverted by segregation and source reduction would be low. End-users are not applicable, because infectious waste is not recycled or reused. Methods for handling materials are those that are currently required by the DHS.

No additional facility needs are required. The three commercial infectious waste treatment companies operating in the Southern California area have sufficient available capacity to handle existing infectious waste quantities as well as increased quantities that will be brought in by new small quantity generator requirements.

7.6.1.4 Asbestos

The DHS performed a study of asbestos waste treatment methods in late 1989 and determined that the existing federal treatment method was adequate for mitigating the threat to human health and the environment from asbestos hazardous waste. The treatment method is wetting, containment, and land disposal in a landfill permitted for asbestos and operated in accordance with required procedures. The DHS also found that vitrification companies were temporarily set back in their plans to build two vitrification plants in San Bernardino County due to California requirements to obtain a hazardous waste treatment permit. The selected alternative is to continue the existing procedure of landfilling in approved landfills, and monitor the progress of the DHS in identifying alternative treatment technologies.

Continuation of the existing program does not divert waste from landfilling, does not involve end-users, and follows existing procedures for handling materials. No additional facility needs are required.

7.7 Special Waste Program Implementation

[(18733.5)]

7.7 Special Waste Program Implementation

[(18733.5)]

Implementation of the special waste alternative is discussed below, including the following information: the agency responsible for implementing the alternative, implementation tasks, implementation schedule, costs and revenues.

7.7.1 Tires

The selected tire alternative will be implemented by the Orange County IWMD and the selected private contractor. Implementation tasks will include:

- Continue tire shredding at Orange County landfills
- Select a private contractor to shred tires and sell shredded tires to recyclers
- Support the state program of tire facility registration and permitting
- Encourage existing stockpile inventory reduction, if any exist
- Coordinate with Southern California counties to develop a regional approach to waste tire programs in support of AB 1843 and market development for recycled products
- Monitor waste-to-energy technologies such as pyrolysis, incineration, and RDF (TDF) and provide annual status reports to the County Board of Supervisors
- Implement a tire reuse public education program
- Study the feasibility and impacts of developing a tire procurement policy for retread tires

The implementation schedule for the above tasks is provided on Table 7-16.

The County charges \$51.25 per ton of tire disposed at Olinda/Alpha and Prima Deshecha Landfills. The County will pay the private contractor a per ton fee to shred the tires at Olinda/Alpha. The recycled tires will be sold to recyclers and the County will receive a portion of the profits.

Additional County expenses will include the contractor's charge for tire transport trucks from Prima to Olinda/Alpha and IWMD labor for administering private contractor contracts and continuing alternate tire management studies.

The City of La Habra will provide financial support to this program through tipping fees paid at the County landfills and support of public education activities. The City of La Habra may also ban tire stockpiling in their jurisdiction and develop and enforce a retread tire procurement policy.

7.7.2 C/D Debris

The implemented alternative will be led by the Orange County IWMD with support from Orange County EMA Public Works.

The implementation tasks include:

- Preparation and distribution of educational material to disposers of C/D debris.
- Revision of bid specifications by EMA Public Works for road base, sub-base, and back-fill materials
- Evaluation and determination of whether current tip fee deters landfill disposal of C/D debris
- Raise the C/D debris tip fee to a value higher than the cost of doing business with a private sector recycler

The schedule for implementation of these tasks is shown on Table 7-16.

Costs include labor and expenses for identifying and educating target audiences, labor and expenses for revising and issuing new bid specifications, and labor for reevaluating and possibly implementing higher C/D tip fees. No additional revenues will be generated unless the tip fee is raised above the current rate of \$22.25 per ton.

The City of La Habra will provide financial support to this program through tipping fees paid at the County landfills and support of public education activities.

7.7.3 Medical Waste

The agency responsible for implementing this alternative will continue to be the Orange County HCA EHD implementing local policy as well as implementing DHS requirements. Orange County will evaluate and implement the requirements of the new Medical Waste Management Act (AB 109 and AB 1641) within six months of the passage of the act, which passed September 1990. Additional staff and program materials will be developed for small quantity generator education and enforcement.

Implementation tasks for this alternative include:

- Expansion of the load check program at Orange County landfills to SQG medical waste.
- Identification of SQGs
- Incorporation of training, investigation, and education of SQGs into existing medical waste management program
- Continuation of existing large quantity generator program
- Expansion of the public education program

A schedule for implementation of these tasks is shown on Table 7-16.

Costs associated with this alternative include the cost of identifying and educating new generators and expanding the load check program. Labor and expenses for public education will also be required. Money from registration permit fees required by AB 109 and AB 1641 will be used to fund the programs.

The City of La Habra will provide assistance in identifying the small quantity generators in its jurisdiction and will support the County HCA EHD with educational activities for small quantity generators.

7.7.4 Asbestos

The IWMD, with assistance from the DHS Toxic Substances Control Division and RWQCB, will be responsible for implementing the asbestos alternative.

Implementation tasks will include:

- Continuation of landfilling asbestos waste outside Orange County
- Continuation of checking loads at Orange County landfills and rejecting loads containing asbestos
- Monitoring the progress of the DHS regarding asbestos waste treatment alternatives.

The schedule for implementation of these tasks is discussed shown on Table 7-19.

The cost to implement this program is the labor for load check training and implementation and monitoring DHS alternatives.

The City of La Habra will provide support to the County through a public education program geared toward proper disposal of asbestos waste.

7.8 Special Waste Program Monitoring and Evaluation

[(18733.6)]

7.8.1 Monitoring and Evaluation Methods

This section describes how the County and the City of La Habra plan to monitor and evaluate the special waste programs to determine whether the goals and objectives are being achieved. The following topics will be discussed for each special waste:

- Monitoring methods
- Criteria for measuring effectiveness
- Responsible agencies
- Cost and funding requirements
- Contingency measures to implement if a shortfall should occur.

A summary of the monitoring and evaluation program is included in Table 7-17.

7.8.1.1 Tires

Tire program monitoring will consist of recording daily tonnage of tires received at the landfill and comparing tonnage to previous disposed quantities. A landfill weigh scale will be used and records will be kept onsite. Tire waste diversion studies will be updated yearly. Loads from Prima Deshecha and Olinda/Alpha Landfills will be noted separately to assess the need for additional private contracts for waste tire diversion.

Evaluation criteria will include the reduced quantities of shredded tires landfilled, and the increased quantities of tire diverted (through recycling or retreading). The quantities will be qualified according to increased or decreased population in the County and the relative increase or decrease in vehicles.

Responsibility for monitoring will be with the IWMD and their oversight of the private contractor. The private contractor will perform recordkeeping. The IWMD will evaluate performance.

Expenses will be recorded for the tire contract and for IWMD labor required to administer the program. Any tire resale revenues will be included in operation and maintenance savings. Funding will be provided through tire tip fees.

A contingency measure will be to enter into long-term recycling contracts for shredded tires.

The City of La Habra will review the status of these programs, and if the goals and objectives are not being met will provide additional support through public education.

7.8.1.2 C/D Debris

C/D debris monitoring will consist of recording daily tonnage of C/D debris received at the landfill and comparing tonnage to previous disposed quantities. All loads will be measured, and those that are used as wet weather construction material for landfill operations will be noted as recycled quantities. A landfill weigh scale will be used and records will be kept onsite. C/D debris waste diversion studies will be updated yearly. An additional monitoring method will be to record the amount of recycled C/D material used in city and County road construction or renovation projects.

Evaluation criteria will include the reduced quantities of C/D debris brought to the landfills and the increased quantities diverted for recycling purposes. The quantities will be qualified by the relative amount of construction, demolition, and renovation occurring in the County for each time period.

Responsibility for monitoring will be with the IWMD at the County landfills. The County EMA Public Works Division will monitor the amount of recycled C/D debris used in road construction projects.

Costs of the monitoring and evaluation program will include labor for IWMD staff and EMA staff to maintain records and perform waste diversion studies.

If a shortfall of recycled materials occurs, the County can increase C/D debris tip fees or ban C/D debris from County landfills. The County can also investigate the feasibility of operating a recycling facility for items not routinely recycled by private recyclers. The County can also require private recyclers to report the quantities of material recycled, so a more accurate number can be obtained.

The City of La Habra will review the status of the programs, and if the goals are not being met will provide additional support through public education.

7.8.1.3 Infectious Waste

Monitoring for infectious waste will focus on determining with greater accuracy the quantity of waste generated and treated prior to landfilling. Monitoring will include summarizing information regarding waste quantities and treatment methods submitted by generators and treatment facilities. Facility source reduction programs and reduced waste quantities will be identified through routine inspections. A record of inspected large quantity generator facilities and frequencies of inspection will be kept.

Evaluation criteria will focus on the reduced hazard of untreated infectious waste disposed at landfills. Criteria will include increased numbers of regulated generators, increased quantities of infectious waste treated prior to landfilling, and increased numbers of source reduction programs (including estimated reduced quantities) at individual facilities.

Responsibility for monitoring will be with the Orange County HCA EHD and the IWMD. The IWMD will assist in identifying which individual facilities implement source reduction programs.

Costs of the monitoring and evaluation program will include labor and expenses for increased Orange County HCA EHD staff.

A contingency measure could include requiring source reduction plans from large quantity generators and implementing a database for SQG quantities. Both of these measures require the County to pass an ordinance giving them legal authority to implement these items.

The City of La Habra will review the status of these programs, and if the goals and objectives are not being met will provide additional support through public education and potential support for ordinance changes.

7.8.1.4 Asbestos

Monitoring for asbestos waste reduction will include identifying the quantity of asbestos waste generated in the County each year through the California hazardous waste manifest database. Monitoring will also include periodic reports on DHS progress in identifying alternative treatment technologies. Landfill load check programs will be monitored for the number of asbestos loads turned away from Orange County landfills.

Evaluation criteria will include reduced quantities of asbestos waste generated in the County as determined by manifests. Quantities will account for increased numbers of asbestos abatement programs being conducted in the County.

Responsibility for monitoring will be with the IWMD, supported by information collected by the DHS. Evaluation will be performed by the IWMD.

Costs for monitoring and evaluation include labor for staff to evaluate DHS manifest data and report on DHS treatment alternatives. Expenses include the cost of obtaining sorted manifest data from the State.

Since the current available and accepted asbestos waste management method is containment and wetting, contingency measures to reduce asbestos waste generation are not feasible.

The City of La Habra will review the status of these programs, and if the goals and objectives are not being met will provide additional support through investigation of alternative treatment technologies.

7.8.2 Criteria

The City of La Habra plans to evaluate the effectiveness of the special waste programs by applying the following criteria to each activity and program:

1. Were the anticipated special waste diversion objectives attained?
2. Did the responsible entities execute the tasks required? (Responsible

2. Did the responsible entities execute the tasks required? (Responsible entities are described in Section 7.5.1.)
3. Were the tasks implemented on schedule? (Task timing is outlined in Section 7.5.1.)
4. Did targeted sectors participate in the anticipated manner? (Targeted sectors are identified in Section 7.5.1.)
5. Were all recovered materials successfully marketed/used? (Anticipated markets/end-users are described in Section 7.4.3.)
6. Were all activities executed in an environmentally acceptable and approved manner? Do the special waste program activities meet all local, state, and federal regulations?
7. Were targeted hazardous materials diversion objectives met? The hazardous diversion objectives for asbestos is to divert all (to the extent feasible) asbestos-containing material from Olinda/Alpha Landfill through the program.

Each criterion will be applied to each special waste activity – the tire, asbestos, construction demolition, and waste programs. The City will consider contingency measures for those criteria that receive negative responses.

7.8.3 Responsible Agency

Responsible agencies for all Special Waste Component programs are discussed within each selected program and are also identified within Table 7-16.

7.8.4 Contingency Measures

Contingency measures are identified for the special waste program. The measures will be implemented if criteria identified in Section 7.6.2 are not fulfilled.

consider implementation of the following:

- Survey the sectors involved to identify the reasons for the lack of program success.
 - Increase incentives through legislation, regulation, and disposal rates.
 - Increase the education program in terms of frequency and/or number of targets.
 - Revise objectives to reflect more realistic environment.
2. If required tasks are not executed by the responsible entities, the City will consider implementation of the following:
- Reevaluate City staffing adequacy.
 - Revise job and task descriptions.
 - Reestablish coordination between City divisions.
 - Identify reasons for lack of private sector participation.
3. If tasks are not implemented in a timely manner, the City will consider implementation of the following:
- Reevaluate City staffing adequacy.
 - Revise job and task descriptions.
 - Reestablish coordination between City divisions.
 - Identify reasons for lack of private sector participation.
4. If target sectors fail to participate adequately or as anticipated in the special waste program, the City will consider implementation of the following:

- Survey the sectors to identify the reasons for their lack of participation.
 - Increase incentives through legislation, regulation, and disposal rates.
 - Provide increased access to technical assistance.
 - Increase appropriate education and promotional activities.
5. If markets/end-users prove inadequate, the City will consider implementation of the following:
- Perform market survey to determine problems with, or constraints to, marketing/using recovered materials.
 - Investigate cost effectiveness of end-use alternative.
 - Explore alternative markets and end-uses.
 - Increase market outreach, education, promotion, and advertising.
 - Investigate marketing and coordination with other jurisdictions to improve materials salability.
6. If some aspect of the special waste program does not meet local, state, or federal regulations, the City will consider implementation of the following:
- Identify the problem areas.
 - Correct problems to meet local, state, and federal regulations, as appropriate.

TABLE 7-19
SPECIAL WASTE PROGRAM IMPLEMENTATION SCHEDULE

Program	Responsible Entity	Tasks	Schedule	Estimated Costs	
				Public	Private
Tire Shredding and Recycling Program	IWMD Public Services Department Recycling Coordinator	Support County Tire Recycling Program	1991-2000	Included in landfill tipping fees	
Construction/Demolition Private Facility Recycling Program	IWMD County EMA County Public Works Public Services Department Recycling Coordinator	Work with construction waste haulers in establishing C/D recovery programs	1991-1992	\$2,000	
		Work with C/D haulers to develop markets for recovered materials	1992-1998	\$2,000 per year	
		Arrange for proper documentation from C/D haulers	1992-1994	\$1,000 per year	
Infectious Waste Program	Orange County HCA EHD DOHS	Support County and DOHS Infectious waste diversion program.	1991-1992	Included in landfill tipping fees	
Asbestos Waste Landfilling Programs	IWMD DHS Toxic Substances Control Division Public Services Department	Continue landfilling asbestos wastes	1991-1993	Included in landfill tipping fees	
		Continue Orange County Load Checking Program	1993-1995		
		Monitor progress of DHS treatment alternatives	1995-1998		

Costs shown are for general administration and support staff.

Section 8

Education and Public Information Component

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:

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Dated: May 27, 1991

Section 8

Education and Public Information Component

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Appendix

Education for
the 21st Century

SECTION 8 EDUCATION AND PUBLIC INFORMATION COMPONENT (18740)

8.1 Introduction

This component is organized into two types of programs: public information and public education programs. These programs are then categorized into: source reduction, recycling, composting, or special wastes.

A public information program begins with developing participation and awareness. To increase public participation, the City must facilitate programs which impact the opinions, attitudes, and behavior of La Habra's residents with regard to source reduction and recycling programs. The value of public information is to increase understanding and change individual waste management practices. Through various public information activities, residents of the City of La Habra will learn about the issues and problems surrounding the management of its waste and what each resident can do to be a part of the solution. In particular, community participation means involvement in the planning of solid waste programs. Public participation is essential in the development of source reduction and recycling programs.

A public education program is critical to the growth and long term success of waste reduction, recycling and composting programs and to the modification of public attitude and waste behavior. Through education, individuals gain the understanding that the choices they make impact the people and the environment around them. The foundation of a successful education program is a curriculum in kindergarten through college. It is important to note that a school-wide program will have more effect than a single classroom program.

8.2 Component Goals and Objectives

[18740(a)]

Each city is required to include a description of education and information objectives for the short-term and medium-term planning periods of the SRRE. Based upon this requirement, the following objectives have been selected for the City of La Habra.

8.2.1 Component Goal

The goal of the Education and Public Information Component is to increase public awareness of and participation in source reduction, recycling, composting, and special waste reduction and recovery.

8.2.2 Short-Term Objectives (1990-1995)

- Designate a Recycling Coordinator within one organizational structure who is responsible for developing and implementing public information programs, providing technical assistance to businesses and organizations, and developing educational programs for the school system by October 1991.
- Utilize the Planning Commission to assist policymakers in formulating and implementing the City's source reduction and recycling goals by October 1992.
- Begin the development of informational brochures, pamphlets, door hangers and fact sheets for the public starting in 1992.
- Survey public opinion regarding solid waste issues such as source reduction, recycling, and composting to determine education and information needs starting in November 1992.
- Establish a network of volunteers for activities such as promoting recycling in their neighborhoods beginning in 1993.
- Develop a Recycling Newsletter to inform the citizens of progress made in the various diversion programs in 1991.
- Develop a network of elected officials and community leaders and organizations that will promote public education in 1993.
- Develop outreach and media presentations such as solid waste exhibits at city-wide events, shopping centers, and other public locations in 1993.

- Encourage involvement of the community in planning and promoting new source reduction and recycling methods in 1992.
- Begin the development of an educational series on waste diversion that would be suitable for presentation to grades Kindergarten through 12 by guest speakers, e.g. recycling coordinator, waste haulers, and recyclers in 1993.
- Encourage the involvement of school children and youth groups in recycling drives, contests, and other activities related to source reduction and recycling efforts in 1993.
- Designate a school recycling coordinator to ensure recycling within the school in 1993.
- In conjunction with the school districts, develop student-made video tapes and articles to inform the community in 1993.
- Conduct public and school tours of recycling centers and processing plants in 1993.
- Work with the school district to develop an Environmental Quality Affairs Committee within the school in 1993.
- Begin development of a promotional campaign whereby public officials and community leaders may become involved in the community's SRRE program in 1992.
- Develop special events and an awards program for leading participants in various categories, such as schools, churches, small, medium, and large businesses in 1993.
- Develop and promote a small voluntary battery collection program in 1994.
- Begin the development of composting, recycling, and source reduction training sessions by 1994 through 1997.

- Develop a commercial and office recycling program guide for businesses in 1993.
- Develop press packets to facilitate prominent media coverage of programs (1991 through 2000).
- Prepare and disseminate "how to" booklets on source reduction, recycling and composting in 1993.
- Publicize successful government office and private business source reduction and recycling programs starting in 1993.

8.2.3 Medium-Term Objectives (1995-2000)

- Establish a speakers bureau to provide community groups with contact people to speak about recycling, composting, or source reduction in 1995.
- Work with the school district to establish a "3-R's Day" within the school to promote awareness and participation in 1995.
- Establish a video lending library (1993).
- Compile and publicize case studies of successful government office and private business source reduction and recycling programs in 1995.
- In conjunction with the school district, develop a waste management curriculum for grades Kindergarten through twelve that teaches waste management and recycling concepts within their local community in 1995.
- Develop a higher education waste management curriculum that promotes community awareness of solid waste issues in 1996.
- Establish a City operated composting demonstration project to provide a "hands on" community project in 1995.

- Investigate the establishment of an Information Center for central dissemination of information and education materials and to house a complete library of resource materials in 1996.
- Develop and promote community action projects in 1996.

8.2.4 Targeted Solid Waste Generators

Based upon the results of the Solid Waste Generation Study conducted by the Orange County Integrated Waste Management Department, the City of La Habra has elected to emphasize new educational and information efforts directed at commercial and industrial businesses operating within the City. These generators produce more than 63% of the wastes generated from within the City and therefor represent the greatest opportunity to gain reductions from source reduction and recycling educational and informational programs. Additional public education and information efforts are focused upon school aged children, through proposed school programs which will broaden the outreach into individual home (residential generators) owners. As more specific waste generator information is learned additional programs may be developed to target specific types of businesses and industries.

8.3 Existing Conditions Description

[18740(b)]

To meet the increased waste stream diversion goals of the Integrated Waste Management Act, it is important to examine what information and education programs currently exist under current diversion levels. In this way, we can determine what programs are lacking and which programs are effective but need expanding in order to meet the goals.

8.3.1 Public Information

8.3.1.1 National Programs

On a national level, public information has been developed by the U.S. EPA and others to promote public education and school education on solid waste issues, such as how to recycle. No national program is required to be implemented by La Habra.

8.3.1.2 County Programs

The County has sponsored a "Recycled Products Fair" introducing recycled products to county employees, the general public, and municipalities.

Brochures have been produced by the County to inform the public of ways to reduce their waste. Some brochures cover buying bulk quantities, purchasing products made of recyclable materials or with minimal packaging.

"Every Step You Take" is a source reduction and recycling video produced by the Orange County Integrated Waste Management Department to increase public awareness of source reduction activities. The video is available to use.

8.3.1.3 City Programs

The City established the position of a solid waste management researcher. One of the duties of the solid waste management researcher is to inform the Planning Department, Public Services Department, City Council, and the public of solid waste related issues. La Habra does not have a well-defined public education and information program at this time. A small amount of informational material has been produced on recycling and waste reduction. This work is continuing and will be built upon in the implementation of the formal SRRE public information component.

8.3.2 Public Education

The School District does not have standardized source reduction and recycling programs taught in the schools. There are no state-wide requirements for teaching recycling in the schools nor are there State-sponsored programs. It is up to the teacher or the individual school to make recycling a part of their curriculum. When questioned, many instructors indicated that they have too much to teach as it is and do not want another required curriculum to teach without significant support and funding. However, the instructors also indicated that recycling needs to become a positive behavior included within the daily curriculum.

8.4 Selection and Implementation of Programs

[18740(c)&(d)]

In order to provide a comprehensive cost-effective educational program, it is important to develop integrated educational and informational programs which address more than one issue at a time. Integrating these programs with those being conducted by Orange County and the cities surrounding La Habra will also increase their value and cost effectiveness. It is also important to target those categories of waste and waste generators which have been identified through the Solid Waste Characterization Study to be most significant. The data from the Study indicates that the La Habra waste disposal stream is comprised of 52% residential waste, 17% commercial waste and 31% industrial/construction/demolition waste. Of the residential waste stream, 23% is composed of yard waste which indicates that education and information programs regarding residential composting will be of particular benefit. Of the commercial waste stream, cardboard, wood waste, food waste, plastics and ferrous metals comprised the greatest percentages. Food wastes may be composted provided that green wastes are separated from fatty materials. Commercial recycling of cardboard and other materials may be expanded if model programs were created and information on establishing such programs were readily available.

Sections 8.4.1 through 8.4.13 describe public information programs. Sections 8.4.14 through 8.4.20 describe public education programs. Table 8-1 through 8-9 provide public education implementation responsibilities, cost estimates, possible funding sources and targeted implementation dates.

8.4.1 Designation of a City Recycling Coordinator

The City would establish the position of a recycling coordinator. The coordinator would be responsible for public information and education programs as well as source reduction, recycling, composting, and assisting with development of various funding sources.

Although the City of La Habra has designated a solid waste management researcher within the Planning Department, the responsibilities of this position will need to be substantially increased to assist in the development of the SRRE. However, the future duties and responsibilities of this position need to be clearly defined and focused toward the achievement of the City overall recycling and source reduction goals. It should be noted that the duties and responsibilities outlined herein are recommendations only and are presented for planning purposes of projecting administrative needs and funding for

program implementation . Duties of personnel are subject to Civil Service Rules and Regulations and funding for staff and assignment of responsibilities must be approved by the La Habra City Council and is therefor subject to yearly budget constraints.

The following is an overview of the recycling coordinator's assumed redefined duties and responsibilities:

The coordinator's job description should be redefined to include educating the public about the need for, and benefits derived from recycling. These duties may be accomplished by developing informative displays relating the need and benefits of recycling. The recycling coordinator should be responsible for creating a media program that highlights upcoming events and solid waste issues, while stressing the importance of source reduction, recycling, composting, and transformation. The position should also be responsible for organizing field trips with local haulers, recyclers, and landfill operators in which school children and interested members from the public may tour solid waste management facilities to gain a better understanding of solid waste management issues. The coordinator should also work with private industry and other public agencies to inform the public of opportunities available to reduce the waste stream and perform recycling.

These duties would be in addition to the duties required to acquire data necessary for the development, monitoring, and evaluation of the specific source reduction, recycling, and composting programs discussed in Sections 4,5, and 6 of the SRRE.

City's Role:

- Define the position and responsibilities of a recycling coordinator to implement and coordinate the recycling and source reduction activities of the city.
- Designate a Recycling Coordinator
- Define duties and responsibilities
- Assure adequate funding to carry out responsibilities
- Evaluate the recycling coordinator, check to see if scheduled tasks were implemented or completed.

Implementation:

Immediately upon approval of the Final SRRE by the City Council, activities would begin for redefining the duties and responsibilities of the recycling coordinator position. The recycling coordinator position should be developed as a full-time permanent position holding the daily responsibility for achieving the mandated recycling and source reduction goals. Upon approval by the City Council for redefining the position, adequate provisions should be implement to assure the position has adequate funding to carry out the responsibilities.

Once accomplished, the recycling coordinator would be responsible for initiating and overseeing the various SRRE programs. The coordinator would report to the City Manager and prepare reports and agenda items for City Council consideration and action. The coordinator would prioritize programs and establish future staffing and funding requirements. The recycling coordinator position would be evaluated on a regular basis to determine if the work still requires a full-time staff member and if the coordinator's responsibilities are being adequately fulfilled. In light of changing interpretations of the Integrated Waste Management Act of 1989, the responsibilities of the coordinator may need to be adjusted periodically.

The baseline cost of the program is comprised of the cost of the position and necessary support staff. Other costs, associated with the recycling coordinator's activities such as printing newsletter, travelling and giving presentations, and audio visual materials, would be connected to individual programs.

8.4.2 Develop Public Information Resources

Public information would be made available to the public. The information would contain listings of drop-off and buy-back recycling centers, the hours, and type of recyclables accepted. Information would also contain definitions and examples of the 3 R's: Reduce, Reuse and Recycle. Residents would then be informed on how they can reduce their waste to the landfill by practicing source reduction, reusing materials, and recycling aluminum, glass, plastic and paper.

City's Role:

- Delegate the role of preparing the information for distribution to residents to the Recycling Coordinator.
- Evaluate the public's response to the information available. Is it increasing recycling participation? Is the information easily available?
- Provide adequate funding for materials and distribution.
- Evaluate the recycling coordinator. Is the information accurate? Was the information distributed within the specific time line?

Implementation:

The recycling coordinator and/or the Public Services Department would prepare information on recyclable materials, collection programs, Materials Recovery Facilities and uses for collected materials. The information may be inserted into utility bills or made into door-hangers. This information would contain recycling announcements and instructions for residents. Informative brochures and handouts may be developed and provided to residents and appropriate commercial businesses relating alternatives to landfilling items such as refrigerators, freezers, washers, and dryers.

The recycling coordinator would prepare hand-outs and fact sheets regarding the different solid waste issues. Information would be distributed to a minimum of 50 percent of the businesses and residents within the first year of the program and the remaining 50 percent in the next year. Volunteer groups, such as the Girl Scouts, Boy Scouts, or private volunteers may participate by delivering door-hangers or brochures to residents.

The program's cost would reflect the staff-hours per week devoted to this program by the recycling coordinator and assisting staff, and/or the cost of materials and distribution estimated to costs approximately \$2,000 per year.

8.4.3 Work With Public Officials

Elected officials would use their visibility to encourage source reduction, recycling, and

composting among residents and businesses. Elected officials would participate in a source reduction, recycling and composting program within their own offices and communities as an example for the public. Elected officials would promote the 3 R's with speaking engagements to community groups, businesses, and schools. The officials may also use radio, television, and the local newspaper as ways to increase public awareness.

City's Role:

- Encourage elected officials to promote source reduction, recycling, and composting.
- Research as to what would be the best use of media in working with public officials to promote source reduction, recycling, and composting.
- Designate someone to set up speakers and testimonials with community groups, businesses, and schools.
- Evaluate the program's effectiveness: Has recycling participation increased? Have 50 percent of the residents been contacted within the first year and 50 percent thereafter?

Implementation:

Elected officials may participate in endorsing recycling by speaking to community groups, working with the local media, and writing letters asking the public to participate. Local officials can discuss and promote alternatives to landfilling and the benefits of source reduction to the community on local cable television, radio, and newspaper. Letters would be sent to 50 percent of the residents the first year and 50 percent thereafter. The information regarding source reduction, recycling, and composting would be distributed at the start of the source reduction and recycling program and continue throughout the program. The cost would include materials, distribution, and promotional advertising. The estimated annual costs for this program will vary from \$5,000 to \$7,500.

8.4.4 Initiate a "Recycling Day"

Recycling Day would be an event to publicize the need for recycling, source reduction, and composting. A specific date would be set and promoted through television, radio, newspapers, and fliers. Displays, exhibits, games, informative brochures and fact sheets would be available to the public. Recycling aluminum, plastic, and paper would be promoted with awards to the person or group who brings the most to be recycled. Snacks could be served using recycled materials and bins would be set up to dispose of the waste according to its make-up. The local waste hauler, recyclers, the recycling coordinator, and representatives of the Planning Department would be available to answer questions. The event's purpose would be to increase public awareness and support for an integrated solid waste program.

City's Role:

- Designation of a date and place for "Recycling Day".
- Assist in the funding requirements.
- Delegate someone (Recycling Coordinator) to be in charge of organizing the day, including games, exhibits, awards, guest speakers and promotion.
- Encourage the local schools to be a part of Recycling Day.
- Encourage the local waste hauler and recycling company to be a part of Recycling Day.

Implementation:

Within the first two years of implementation of the SRRE, the Recycling Coordinator through the City Council would investigate the possibility of initiating a "Recycling Day" to increase awareness and support of the City's Source Reduction Program. The event could begin with sponsoring a recycling contest between elected officials competing to determine who can reduce and recycle the most waste for a week or months timeframe. A specific date could be designated as "Recycling Day", to announce the winners. The contest could be advertised in the local schools, newspaper, radio, and cable television. The community

would be encouraged to be a part of "Recycling Day". Various community and school groups could compete to determine who could collect the most recyclable products and win prizes for the most collected. Other potential contests could include a recyclable can stacking contest, recycling poster contest for school children and other types of activities. Exhibits and displays that focus on recycling, composting, and source reduction would be available for the public to view. Informative brochures, fact sheets, bumper stickers, and T-shirts could be distributed to everyone who attends by local sponsors such as Western Waste Inc., CVT, and CR&R to increase public awareness. Recycling and composting bins could be made available to the public for purchase along with free information regarding recycling.

The costs of the program would be comprised of advertising, the use of a park, printing of brochures, and printing materials for exhibits and displays, and the printing of bumper stickers and tee-shirts. The costs may range from \$1,500 to \$3,000. Funding may come from the Planning Department, the waste hauler, local recyclers, or concerned organizations. The event could be established to become an annual program to ensure public information and participation.

8.4.5 Community Group Outreach

A community outreach program would encourage groups to become involved in recycling, composting and source reduction. Community groups would help distribute information regarding source reduction, recycling, and composting. Community groups would be encouraged to set up recycling drives, Christmas tree collections, and composting demonstrations. Under this program the recycling coordinator would work with the advisory committee and community groups, organizations, and churches to increase awareness of the community.

City's Role:

- Encourage community groups to become involved in source reduction, recycling, and composting.
- Designate the recycling coordinator to organize non-profit groups to Assist in the distribution of fliers, door hangers and fact sheets to the community.

- Assist in development of funding sources for materials, printing, and distribution of fliers promoting recycling drives held by community groups.
- Evaluate community groups involvement. Have the groups set up recycling drives? Is the community receiving the information the non-profit groups distribute? Is recycling participation increasing among residents?

Implementation:

Community involvement plays a major role in a successful recycling and source reduction program and should be implemented within the first two years of the program. Regular meetings with various civic and neighborhood groups could be held to discuss recycling and solid waste issues, as well as what steps may be taken to become involved in educating others about source reduction and recycling. Under this program community groups could also interface with the advisory committee regularly to communicate local concerns, problems, and wants. The outreach program could involve non-profit groups such as Boy Scouts, Girl Scouts, and non-profit groups to help inform the public about recycling by distributing fliers and brochures as well as by participating in public information displays. These groups may also be encouraged to establish drop off boxes, newspaper drives, composting demonstrations, and other similar activities which would benefit the group.

The cost of the Community Group Outreach Program would include the advertising of newspaper or aluminum can drives, producing fliers, and providing materials for public information displays. These costs are estimated to be \$500 to \$1,000 per year.

8.4.6 Conduct Public Tours

The City, waste hauler, recyclers, or others may conduct tours to educate public groups about solid waste issues through tours of landfills, recycling centers, and material recovery facilities. Community groups would be encouraged to attend the tours and learn more about recycling, and landfill issues. Tours of landfills and recycling centers would be an effective method in exposing the seriousness of source reduction, recycling and composting. The tours may consist of explanations of what the landfill is, how waste is deposited each day, and the purpose of the equipment. In addition, a pile of trash may be separated from the working area and a presentation on recycling may be given.

City's Role:

- Encourage the local haulers and recyclers to conduct tours of landfills, recycling centers, and MRFs.
- Designate the recycling coordinator to promote the tours to schools, community groups, and businesses.
- Assist in providing funds for materials, printing, and distribution of fliers to promote the program.
- Evaluate the success of tours to local landfills and centers. Does the community know about the tours? Does the tour increase public awareness about solid waste issues?

Implementation:

Those interested in providing tours of their facilities may contact the recycling coordinator. The City or local hauler may conduct regularly scheduled tours in order to increase public awareness. Operators could hand out bumper stickers or decals to promote their facility and waste reduction efforts. The recycling coordinator would promote the tours to community groups, schools, and businesses.

The cost of the program would primarily be the time of the waste hauler, cost of materials and printing, and distribution of fliers promoting the program. These costs are estimated to be \$500 to \$1,000 per year.

8.4.7 Establish a City Recycling Newsletter

A quarterly or biannual newsletter would be an effective tool for keeping the citizens, the commercial sector and industry informed of progress made in the various diversion programs which have been instituted. One of the most effective ways to increase and maintain participation in recycling efforts or any "conservation" effort is to measure success and keep the participants informed. A quarterly newsletter would include all aspects of the City's waste reduction efforts. Special topics or columns could be included in the newsletter which detail the composting, MRF operation and other types of educational information.

City's Role:

- Designate the Recycling Coordinator to work on the newsletter.
- Assist in providing funding for materials, printing, and distribution.
- Research and implement the most cost-effective method of distributing the newsletters to residents and businesses.
- Evaluate the newsletter. Is it easy to read and understand? Is source reduction, recycling, and composting being addressed? What is the public's response to the newsletter? Is it being distributed to residents regularly?

Implementation:

The recycling coordinator would work on developing a quarterly or biannual newsletter that is easily read and provides information regarding source reduction, recycling, and composting. The newsletter should be distributed to as wide an audience as possible through direct mail, utility bills, free distribution stands at recycling and drop-off centers, and at all city offices. (Created by January 1992)

The cost of the program would include the printing and distribution of the newsletter. Costs may range from \$1,000 to \$1,500 each year.

8.4.8 Establish a Public Information Center

A public information center would be established to serve the community as a source of information on schedules, planning, activities, locations of recycling bins, and awards programs. Brochures and fliers would be developed to help ensure public information. This facility would serve as a central location for the dissemination of literature, videos and any other materials that are developed through the various programs which have been outlined. Satellite centers may be established in public libraries.

City's Role:

- Designate the Recycling Coordinator to establish a public information center.
- Ensure the Recycling Coordinator provides various types of information to the public.
- Assist in providing funding for promotion and materials for a public information center.
- Evaluate the center's success in making information easily available to the public.

Implementation:

The Recycling Coordinator would be responsible for establishing a public information center. The coordinator would ensure that information is readily available to the public. The coordinator could potentially set up an office within the center. The coordinator would need to advertise how the public might use the center's information to the fullest extent. The advertising may be in the form of mailers, inserts, newspaper, cable television, or radio medias.

The cost of the program would include the costs associated with occupying the necessary space. It would also include the cost of printing brochures and fliers as well as the cost of any video presentations or other such media. The cost may range from \$2,500 to \$3,000.

8.4.9 Establish a Speakers Bureau

One of the best ways to encourage source reduction, reuse, and recycling is to provide the public with information on the scope of this solid waste crisis and offer alternatives to people's current consumption and disposal practices. A speaker's bureau program would be established so that local businesses and organizations could easily inquire about public information on recycling. Speakers on current solid waste topics would be an effective technique for presenting information to community groups, business groups, industrial associations etc.

City's Role:

- Designate the Recycling Coordinator to develop a list of speakers on source reduction, recycling, and composting.
- Assist in providing funding for promotion of a Speakers Bureau.
- Evaluate the Speakers Bureau program. Are community groups and businesses receiving information regarding the speakers bureau, and are they implementing the program?

Implementation:

The Recycling Coordinator would be responsible for locating individuals with knowledge in source reduction, recycling, composting, and special wastes. The coordinator would distribute a list of presentations every six months to community organizations, business groups, and schools.

The cost for a speakers bureau would include any speaker's fees, material, printing, and distribution of fliers or brochures that list the presentations that are available. The cost may range from \$2,000 to \$3,000. Organizations and community groups may help pay speaker's fees which would further reduce the cost. (Created in 1995)

8.4.10 Business Training Sessions

Through training sessions it becomes much easier for employees to participate in source reduction, composting, and recycling programs. For example, a desktop paper recovery box could be designed with the City recycling logo and placed under each employee's desk and around the office. If the box were to be used for high grade paper, the list of "do" instructions would include all white paper, typing paper, copier paper, stationery, memos, computer, printout, multistripped paper, and laser paper. The "don't" list would include carbon paper, envelopes, photographic or blueprint paper, newspapers, magazines, fax paper and coated paper. The employees would be shown how to use the box, where to empty it in larger bins, how to prevent contamination and why. Because many recyclables have redemption and scrap value, one option would be to let the employees designate a

charity to benefit from their efforts.

City's Role:

- Promote Recycling Training Sessions among businesses and industry.
- Designate the Recycling Coordinator to develop guides and brochures that businesses may use to further develop their recycling program.
- Assist in providing funding for printing, materials, and distribution.
- Evaluate the Recycling Training Sessions. Has recycling participation increased as a result of training? Are the businesses receiving information that will further develop their program? Are businesses being awarded for diverting large quantities of paper?

Implementation:

Under this program the Recycling Coordinator would initiate source reduction, composting, and recycling training sessions for businesses, as appropriate. The coordinator would produce a recycling guide for businesses and industry to distribute after the training sessions. The training would begin September 1992. Businesses would be invited to attend workshops designed to teach and inform the representatives on how they can recycle and reduce the amount of waste being generated. The coordinator would offer brochures and fact sheets along with the presentation. Awards and recognition would be given to those businesses or individuals who are successful in recycling or diverting large quantities of paper.

The cost of the training session would include printing, materials, and distribution of a mailer to promote the program. It would also include printing brochures, awards, and signs that list do's and don'ts. Businesses would be expected to pay for any recycling bins which would further reduce the cost. Implementation costs are estimated to be approximately \$700 to \$1000 per training session. The number of training sessions held each year would be dependent upon the participation of the business community and the availability of funding for the sessions. For planning purposes, three sessions would be budgeted for the first year.

8.4.11 Develop a Media Campaign

A media campaign could be developed to increase public awareness of source reduction, recycling, and composting. Media coverage, such as newspaper articles, radio interviews, and public service announcements, are low-cost ways to communicate with hundreds to thousands of community members about planning special collection events and project milestones. Advertising space can also be purchased. Although this may be more costly, carefully designed and well-placed advertisements can be well worth the cost. In some cases, local businesses may underwrite advertising costs, if appropriate credit is given. A media campaign that is combined with broad and ongoing education on how to participate, will lead to public support of and participation in source reduction, recycling, and composting programs.

City's Role:

- Research the most cost-efficient method of educating the public about source reduction, recycling, and composting issues and programs.
- Designate the Recycling Coordinator to organize the media program.
- Assist in providing funding for materials, printing, and distribution of necessary information developed.
- Evaluate the media campaign. Has a recycling logo been developed within the first year of the program? Are residents and businesses informed as to the programs available? Has public participation increased as a result of the media campaign? Has information been distributed to various groups within a specific time-frame?

Implementation:

A media campaign could be accomplished by developing an easily recognized recycling logo within the first year of the program (December 1991). A contest may be initiated at the elementary schools to have the students design the logo. The logo could be distributed by waste hauler, certified recyclers, or the Public Services Department on bumper stickers, decals, memo paper, pens, pencils, buttons, and tee shirts to encourage schools and businesses to use the logo. A press packet could also be a vital part of a media program to

facilitate informed coverage by the local print and radio media and should be available at the time the program is implemented. Bumper stickers, flyers, recycling directories, buttons, patches, decals, recycling guides, newsletters, and fact sheets could be provided to community groups and schools within the first two years of the program (December 1993) by the local hauler, recyclers, or Public Services Department. The Recycling Coordinator would be responsible for program development. Brochures and pamphlets could be prepared for insertion into the utility bills or to be used as door hangers. An exhibit describing a balanced approach to integrated waste management could also be developed as part of this program for use in regional and county fairs.

Bumper stickers, flyers, recycling directories, buttons, patches, decals, recycling guides, newsletters, and fact sheets could be provided to community groups and schools. "Newspaper Recycling Starter Kits" could be inserted in home-delivered newspapers in the city. The kit could be a folded, brown paper bag, with a directory printed on the front as to where newspaper can be recycled and the benefits of recycling.

The cost of a media program would comprise printing materials, distribution, awards, press packet, and any items necessary for exhibits. The media program would be ongoing providing public information and education to the community and is estimated to cost \$500 - 1,000 per year.

8.4.12 Produce a Video-Tape Library

Under this program a library would be developed of videotapes and audio-slide presentations for use by community groups and schools. The video-tape library would include media on various waste management issues. Community groups, businesses, churches, and schools would be encouraged to utilize the materials available, and would receive periodic updates of new shows.

City's Role:

- Designate the Recycling Coordinator or the Public Services Department to organize a collection of video-tapes and to promote the service to the community.

Implementation:

Under this program, the Public Services Department and the Recycling Coordinator would work with the County and the school district to develop a community education program which would educate residents about the integrated waste management process such as a class that emphasizes composting procedures and the beneficial uses of compost. These sessions would be offered through community education programs such as ROP and Adult Education. Information regarding the classes would be sent out to residents within the educational institutes class schedule.

The cost of the program would include the printing and distribution of the mailer as well as any speaker's fees. Funding may come from the local college or other sources as they are identified. Community education programs would begin in 1993, continue through 2000, and are estimated to cost \$500 - 1,000 per year.

8.4.15 Designate a School Recycling Coordinator

Designating a school Recycling Coordinator will ensure the promotion of recycling within individual schools. A school Recycling Coordinator will help guide the school and get the school involved with an issue where they can have an impact. The school Recycling Coordinator would organize a school-wide recycling program as well as help choose an appropriate solid waste curriculum. The school Recycling Coordinator may act as a guide for concerns, questions, and suggestions to improve the recycling program.

City's Role:

- Encourage school participation in recycling.
- Answer any questions and concerns schools may have regarding solid waste issues.

Implementation:

Work with the school district to designate one person per school (administrator or staff) to become the Recycling Coordinator for the school immediately upon approval of the SRRE. The coordinator's responsibilities include organizing a recycling program at their school.

With the help of a "Recycling Committee" they could assist in choosing a curriculum, rally for staff support, and monitor the effectiveness of the program.

The costs for this program would be limited to minor administrative costs in time of the designated school recycling coordinator. It is assumed that these costs would be absorbed by existing personnel and would not necessitate the hiring of new personnel.

8.4.16 Recycling Curriculum for Schools

Several waste management curricula have already been developed and are available for use within the school system. A curriculum would be selected that is based on hands-on learning (K-6) and decision making (7-12) with material that defines source reduction, recycling, composting, and waste transformation, e.g. curricula such as Oscar's Options, A Way with Waste, and Keep America Beautiful. The California Department of Conservation has put out "free" curriculum material for the grades Kindergarten through Sixth. "California Containers" is an educational program for the primary grades (K-3) that is intended to increase recycling by students. It explores why we should recycle, how to identify containers that can be recycled and redeemed, how to collect containers for recycling, and where to recycle. "Recycle Now!", was created for the intermediate grades (4-6), and its lessons include science, language arts, social science, mathematics, and art activities. Lesson activities provide opportunities for problem solving, critical thinking, and creative expression.

City's Role:

- Work with the County, adjacent cities, and the school district to encourage schools to choose a curriculum in waste management that promotes active participation within the community.

Implementation:

The school's Recycling Coordinator and the recycling committee would be responsible for choosing the curriculum that best meets their needs within their community by September 1995. An in-service would be provided to prepare teachers for teaching source reduction, recycling, composting, and other related issues. The coordinator and the committee would meet monthly to discuss the school's goals, progress, and any concerns they might have.

The curriculum would be the exclusive cost of the program, ranging from approximately \$1,000 to \$3,000.

8.4.17 Program: Develop a Recycling Program for the Classroom

A recycling program for the classroom is designed to develop an ongoing recycling system and to encourage each student to be responsible for their recyclable waste. The program will reinforce positive behaviors associated with conserving our natural resources, thus over time there may be a behavioral change within students and recycling will become a habit. Students will play a major role in reducing the waste at their school.

City's Role:

- Work with the County, adjacent cities, and school district to encourage individual classrooms to participate in a classroom recycling program.
- Recognize and acknowledge classrooms or schools that are diverting a large quantity of waste through an awards program.

Implementation:

Under this program the students would be encouraged to participate in creating a theme or logo for the school recycling program which could also be adopted by a local community group. The school district or individual school could hold a contest encouraging students of all ages to design a logo as well as posters to promote recycling within their city. A school-wide bulletin board could be displayed to show the school's efforts in recycling. Also, a display that demonstrates how many trees and how much energy has been saved due to the school's efforts may be produced by students and displayed. Student-created material may also be displayed at shopping centers, airports, or grocery stores.

The program could include a student-produced monthly bulletin focusing on recycling. The bulletin would be sent home to keep parents updated on the school's progress. Besides classroom competition, a school-wide newspaper, reproduction paper, and computer paper drive would be initiated in as many schools as possible. Schools within the district could compete with one another to see who recycles the most paper. Awards and recognition would be given to those schools and individuals who contribute the most. The local newspaper could also be invited to report on the school's progress. Award and recognition would be given to the class who recycles the most paper, aluminum cans, newspapers, etc. based on a per capita collection to ensure equal consideration for all schools regardless of size of the student population. Awards could be provided by the local hauler or certified recycler.

Costs would include materials for creating posters, bulletin boards, and displays. Costs would also include printing, materials, and distribution of a monthly bulletin and awards for students. Although costs will be directly related to participation by schools and school districts an initial budget of \$2,000 is assumed to be adequate for program initiation.

8.4.18 School Media Program

A school media program would encourage students to write articles on or videotape the various school recycling programs or other solid waste concerns. These student-made articles and videos could then be distributed to local newspapers, radio stations, and cable television. The City may also use the student developed media in their presentations to businesses, industry, or community groups. Student involvement in recycling, source reduction, or composting is the key to reducing our solid waste in the future.

City's Role:

- Encourage student participation by using the student-created materials in their own presentations.
- Award student-created media that influences public participation in source reduction, recycling, or composting.

Implementation:

This program entails the students documenting how the paper recycling program is working, why it is important for schools to recycle, and how students and teachers feel about their participation. Students could also examine solid waste problems in the county, including limited landfill space. Students would be encouraged to research, write, act in, and film the videotape to inform the school and the community about recycling. The videotape could also be potentially shown to other schools and possibly on cable television. Articles may be printed in the opinion section of the local newspaper.

Cost of this ongoing problem would include a video tape camera tape, and other materials however, these articles and tapes would be developed by the students themselves and are not anticipated to require capital expenditures by public or private groups.

8.4.19 School Environmental Quality Affairs Committee

Develop school-wide support for a recycling program by creating an Environmental Quality Affairs Committee (EQAC) within the school that would include teachers and students working together to set yearly goals for recycling and source reduction.

City's Role:

- Work in conjunction with the school district, County, and adjacent cities to help establish a school Environmental Quality Affairs Committee.

Implementation:

In conjunction with the school district, the school EQAC would identify source reduction and the recycling potential in their school and community. The committee could potentially encourage the cafeteria to use recycled or recyclable materials, encourage the school to purchase recycled paper, and encourage teachers and aides to use double sided reproduction. The committee would educate fellow students and teachers about the school's recycling goals while giving them ideas on how they could recycle more in their classroom. The committee could develop a "Recycle Me!" stamp for papers that are sent home to the parents to encourage parents to begin recycling at home. The committee could also conduct a school-wide recycling survey designed to reach students, parents, and staff to find out what they know about the city's solid waste situation and what types of programs they are willing to support. The committee would encourage the school or P.T.A. to purchase recycling containers to be put near lunch tables so that students can sort their trash. The council could also establish a "Plant a Tree Day", where each class gets to plant one tree and has to take care of their tree. The teachers would discuss the many benefits of trees and how trees relate to paper consumption and the benefits of source reduction and recycling.

Cost for implementation of this program would be limited to minor administrative time in coordinating the program with the school administration and other groups such as the P.T.A. Materials for the implementation of this program are estimated to be \$500 to \$700 per year.

8.4.20 Program: Initiate a "3 R's Day" (Reduce, Recycle, Reuse) within the Schools

Work in conjunction with the County, school district, and adjacent cities to develop a "3 R's Day" that presents student created displays to increase awareness and participation within the school. Topics for the displays would be Reduce, Reuse, Recycle.

Implementation:

The EQAC would coordinate the "3 R's Day". Games will be played, such as who can stack collected aluminum cans the highest. Awards will be given to the students and classrooms that have done the most recycling. Student created material will be displayed to educate others about recycling. The local waste hauler will be encouraged to bring a recycling truck and any handouts they might have. Speakers will be invited from different organizations to discuss the need for recycling and composting programs. The cafeteria will be encouraged to participate by serving lunch to students without the use of disposable products. The program could include inviting the superintendent, board members, cable television, and the local newspapers to attend. The "3 R's Day" should be an annual event that coincides with other city recycling events (November 1995).

The costs will include materials, printing, and advertising of the program. It would also include any awards and speakers' fees that are required. For budgeting purposes, \$700 to \$1,000 per year is estimated to be necessary to implement this program.

8.4.21 Develop Composting "How To" Information

Yard wastes comprise 20 percent of the residential waste stream. In order to reduce the amount of yard wastes generated by 30 percent by the year 1995, backyard composting can make an effective source reduction program.

Implementation:

Implementation of this program would require the Recycling Coordinator to recruit neighborhood leaders, gardening clubs landscapers, or gardeners to give composting and mulching demonstrations and information to neighbors, businesses, and small groups. Fact sheets and guidelines for composting and other technologies would be prepared and made

available to the public and commercial sectors (1993). Fliers and/or newsletters would be sent to businesses listing potential programs and activities they can adopt or participate in. A "demonstration compost" facility would be developed by the City as part of this program. Consumer awareness programs would be established to include seminars and public forums that teach the benefits of source reduction. A school curriculum could also be developed by 1994 that teaches about the benefits of source reduction. Backyard composting information needs to be an ongoing program so that a majority of City residents have an opportunity to become aware that composting is an alternative to solid waste disposal.

The cost for a composting information program would include the staff time needed to train those willing to work with neighborhood groups as well as any salary they may receive after their initial training. The cost would also include printing and distribution of fact sheets, guidelines for composting, speakers' fees, the development of a curriculum, and the cost of the demonstration compost facility. The actual program cost may range from \$2,500 to \$4,000.

The groups would continue to play an active part in public education and information throughout the program's existence. The annual cost would depend on the amount of fliers and advertisements and may range from \$1,000 to \$1,500.

8.4.22 Promote Household Battery Collection

A voluntary collection program for household batteries would be promoted to collect batteries from the home, retail stores, transfer stations, and government offices.

Implementation:

Within this program, the collection of batteries could be promoted by the local waste haulers, Orange County, or other acceptable groups. The program could be promoted with newspaper inserts, display ads, or possibly direct mailing to each residence. A bright colored battery collection sticker could be included to explain why it is important to separate batteries from other solid waste. The sticker could then be placed on a bag when batteries are ready for collection. The information could be developed by the Recycling Coordinator and could also be a part of the City's Household Hazardous Waste Element.

The costs of the program would include printing and distribution of inserts, mailers, or door-hangers. The cost would also include printing of display ads, the battery collection sticker, the collection and disposal by local hauler, and any advertisements either by billboard, radio, or cable television. Funding may come from the local hauler, the County Hazardous Waste Management Program, or other sources not yet identified.

8.5 Monitoring and Evaluation

[18740(e)]

This section is comprised of an outline of how programs will be measured in terms of effectiveness. This section includes the responsible parties who will carry out the monitoring and evaluation of program success and the criteria which will be utilized. Funding is also identified for the monitoring and evaluation activities.

8.5.1 Methods to Monitor and Evaluate Programs

[18740(e)(1)]

Methods to measure the programs success must be developed. Such activities as surveys could be effective to determine the improvement in public awareness and participation. Another method could be to actually review the figures for diversion rates which will give an indication of whether or not participation levels are improving.

8.5.2 Criteria for Evaluating Program Effectiveness

[18740(e)(2)]

The following criteria presented in question form may be applied to each program as a means of determining whether the program has achieved its goals:

Were goals and objectives met?

Were waste generators in La Habra aware and informed about the programs to reduce waste that were available to them?

Was information distributed in the anticipated manner?

Did those who were responsible for carrying out the various tasks actually complete them?

Did community groups, schools, churches, and organizations participate in the anticipated manner?

Did the schools select a waste management curriculum within the time line that was established?

Were the program tasks completed within the timeline that was established?

Were meetings held within the timeline that was established?

8.5.3 Responsible Parties

[18740(e)(3)]

Generally, the La Habra City Manager's Office, Recycling Coordinator, the Advisory Committee, Public Services Department, and Public Works Department will have responsibility for program monitoring. They will be assisted by school personnel, community groups, environmental organizations and business groups like the Chamber of Commerce.

8.5.4 Funding Requirements

[18740(e)(4)]

Funding requirements for all selected Public Education and Information Programs, as well as, monitoring, and evaluation are presented in the Implementation Schedule 8-1. Funding sources are discussed in Section 9, Funding Component, of the SRRE. Costs associated with the Recycling Coordinator position are used for funding considerations and not as actual costs to the City at this time.

8.5.5 Contingency Measures

[18740(e)(5)]

In the event that the objectives are not met by the programs which are completed, contingency measures will be implemented. Such measures can include:

- Reviewing whether the staffing is adequate
- Determining if the job descriptions were clear and attainable

- Determining if timelines were realistic
- Determining if the tasks were appropriately assigned
- Reviewing whether public information was readily available and easy to understand.

In the event other participating agencies (school districts, waste hauler, Orange County) identified within the Public Education and Information Component are unwilling or unable to participate in the selected programs, the City will re-evaluate and revise the component accordingly.

8.5.6 Monitoring and Reporting Schedule

[18740(e)(6)]

The programs selected for implementation will be monitored on a continuing basis, with reports provided annually. A cost/benefit analysis will be performed after each implementation year to better assess the effectiveness of selected programs and more accurately identify funding requirements.

Monitoring and reporting will be done by the Recycling Coordinator, with the involvement of the school Recycling Coordinator. Additionally, reporting will be done on programs that were not implemented on schedule, to determine reasons for delays. Costs for monitoring and reporting are assumed to be included in the Recycling Coordinator's salary as part of the job description and assigned responsibilities.

CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.1 - Designation of a City Recycling Coordinator - Achieving the mandated recycling and source reduction goals - Prepare reports and agenda items for advisory committee and City Council - Prioritize programs - Establish future staff and funding requirements	Recycling Coordinator (City Manager would hire Recycling Coordinator)	\$45,000	Garbage Service Fees (PSD)	July 1991
8.4.2 - Develop Public Information Resources - Prepare information on recyclable materials, collection programs and uses for collected materials - Insert into utility bills or made into door hangers	Recycling Coordinator PD	\$2,000 per year	residents within the	Distribute information to a minimum of 50% of businesses and first year (by July 1992) and 50% the next year (by July 1993).
8.4.3 - Work with Public Officials - Elected officials endorse recycling by speaking to community groups, working with local media and writing letters asking the public to participate	Elected Officials Recycling Coordinator PD	\$3,000 - 5,000	IWMD	Letters would be sent to 50% of the residents the first year (by July 1992) and 50% the year after (July 1993) Other information would be continuous

AC = Advisory Committee

CB = Concerned Businesses

CC = City Council

IC = Identified Recyclers

OC = Orange County Integrated Waste Management Department

NPG = Non-profit groups

PD = Planning Department

PSD = Public Services Department

WH = Waste hauler

CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.4 - Initiate a Recycling Day - Sponsor publicized recycling contest between elected officials - Advertise contest - Create various contests - Designate a day as "Recycling Day" - Exhibits and displays would be available - Brochures, fact sheets, etc. would be available	Recycling Coordinator CC Elected Officials	Advertising Use of park Printing Materials \$1,500 - 3,000	CC PSD WH CB	Within first two years (by July 1993)
8.4.5 - Community Group Outreach - Meet regularly with various groups - Work with non-profit groups to distribute fliers and brochures - Establish drop-off boxes and newspaper drives	Recycling Coordinator AC	Materials Printing Advertising \$500 - 1,000	NPG	By July 1992
8.4.6 - Conduct Public Tours - Conduct regularly scheduled tours - Hand out promotional materials - Promote tours with fliers	City/Waste Hauler CR Recycling Coordinator	Materials Printing Distribution \$500, - 1,000	CR WH PSD	January 1992

AC = Advisory Committee

CB = Concerned Businesses

CC = City Council

CR = Certified Recyclers

IWMD = Orange County Integrated Waste Management Department

NPG = Non-profit groups

PD = Planning Department

PSD = Public Services Department

WH = Waste hauler

CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.7 - Establish a City Recycling Newsletter - Develop monthly newsletter - Distribute through direct mail, free distribution stands, and all city offices	Recycling Coordinator PD	Printing Material Distribution \$1,000 - 1,500	PD Comm. Dev.	January 1992
8.4.8 - Establish a Public Information Center - Ensure information is readily available - Advertise the center's use - Develop mailers, inserts, newspaper articles to advertise center	Recycling Coordinator PD	Materials Printing Distribution Rental of Occupying Space \$2,500 - 3,000	PD	
8.4.9 - Establish a Speaker's Bureau - Locate speakers - Develop and distribute a list of presentations	Recycling Coordinator	Speaker's fees Materials Printing Distribution \$2,000 - 3,000	PD	January 1995 Distribute list of presentations every 6 months
8.4.10 - Business Training Sessions - Initiate training sessions for businesses - Develop and distribute a recycling guide - Develop and distribute brochures and fact sheets - Initiate an awards program	Recycling Coordinator PD	Printing Materials Awards Recycling bins Signs \$2,100 - 3,000 per session w/ 3 sessions per year	PD Comm. Dev.	September 1992

AC = Advisory Committee

CB = Concerned Businesses

CC = City Council

CR = Curbside Recyclers

NPG = Non-profit groups

PD = Planning Department

PSD = Public Services Department

WH = Waste hauler

CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.11 - Develop a Media Campaign - Develop a recycling logo - Distribute publicity materials - Create and distribute a press packet - Develop brochures and pamphlets - Insert brochures into bills or use as door hangers - Create and distribute "Newspaper Recycling Starter Kits"	Recycling Coordinator CR WH	Printing Materials Distribution Awards Press Packet \$500 - 1,000	WH CR	July 1991 - develop logo July 1992 - Distribute various publicity materials Ongoing media program
8.4.12 - Produce a Video Tape Library - Develop a collection of video tapes and audio-slides - Prepare and distribute updated lists of available tapes	Recycling Coordinator	Video tapes Audio-slides Printing Materials Distribution \$500 - 1,500		January 1996
8.4.13 - Community Action Projects - Designate areas to community groups - Promote projects with awards programs	Recycling Coordinator	Awards Advertising \$500 - 1,000	PD PSD CB	January 1996

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ICWMD = Orange County Integrated Waste Management Department

NPG = Non-profit groups

PD = Planning Department

PSD = Public Services Department

WH = Waste hauler

CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.14 - Develop a Higher Education Integrated Waste Management Curriculum - Educate residents of integrated waste management - Prepare and distribute information regarding classes - Designate a class coordinator	Recycling Coordinator School Coordinator	Printing Distribution \$500 - 1,000	Local College IWMD	September 1996
8.4.15 - Designate a School Recycling Coordinator - Organize a recycling program at school - Choose curriculum - Monitor the effectiveness of the program - Initiate an in-service for school's staff	School District Recycling Coordinator	Speakers' fees Printing Materials N/A	School District IWMD Comm. Dev.	July 1991

AC = Advisory Committee

CB = Concerned Businesses

CC = City Council

CR = Concerned Recyclers

NPG = Non-profit groups

PD = Planning Department

PSD = Public Services Department

WH = Wastewater Auditor



CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.16 - Recycling Curriculum - Choose a recycling curriculum - Meet monthly to discuss the school's goals and progress	School Recycling Coordinator Principal School EQAC Curriculum Council Recycling Committee	Curriculum \$1,000 - 3,000	CR WH CB PTA	September 1995
8.4.17 - Develop a Recycling Program for the Classroom - Create a recycling theme or logo - Develop displays and exhibits with student-created materials to be placed around the community - Develop a student-produced monthly bulletin - Distribute bulletin to parents - Initiate an awards program - Promote schools progress with local media	School Recycling Coordinator School EQAC Recycling Council Recycling Coordinator	Materials Printing Distribution Awards Advertising \$1,000 - 2,000	CR WH PTA	September 1993

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CC = City Council

CR = Certified Recyclers

OCWMD = Orange County Integrated Waste Management Department

NPG = Non-profit groups

PD = Planning Department

PSD = Public Services Department

WH = Waste hauler

CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.18 - School Media Program - Students would develop a video tape to inform the school and community about recycling - Print student-created articles in the opinion section of the newspaper	School Recycling Coordinator School EQAC	Materials Printing \$300	WH CB PTA IWMD	September 1993
8.4.19 - School Environmental Quality Affairs Committee (EQAC) - Identifies source reduction and recycling potential of the school and community - Encourage the school to recycle - Educate teachers and students about the school's recycling goals - Develop a "Recycle Me" stamp for papers - Conduct a school-wide survey - Establish a "Plant a Tree Day"	School Recycling Coordinator Recycling Committee	Materials Printing Distribution \$500 - 700	PTA CB Local Nursery	September 1992



CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.20 - Initiate a "3 R's Day" - Develop games to be played - Initiate an awards program - Invite speakers to discuss the need for recycling and composting - Advertise and promote event with local media	City EQAC School Recycling Coordinator School EQAC	Materials Printing Awards Speakers' fees Advertising and Promotion \$700 -1,000	PTA WH CR PD	November 1995
8.4.21 - Develop Composting "How To" Information - Recruit individuals to give composting and mulching demonstrations - Develop fact sheets and guidelines for composting - Develop a "demonstration compost" facility - Advertise compost facility	Recycling Coordinator	Staff time needed to train and give demonstrations Printing Materials Distribution Demonstration compost facility Advertising \$2,500 - 4,000	PSD PD	January 1992

AC = Advisory Committee

CB = Concerned Businesses

CC = City Council

CR = Certified Recyclers

IWMMD = Orange County Integrated Waste Management Department

NPG = Non-profit groups

PD = Planning Department

PSD = Public Services Department

WH = Waste hauler

CITY OF LA HABRA - SOURCE REDUCTION AND RECYCLING ELEMENT

PUBLIC EDUCATION IMPLEMENTATION TABLE

IMPLEMENTATION TASKS	RESPON-SIBLE ENTITIES	IMPLEMENT-ATION COSTS	FUNDING SOURCES	IMPLEMENTATION DATE
8.4.22 - Promote Battery Collection - Promote program with inserts, ads, or direct mailing - Develop information to explain why it is important to separate batteries from other solid waste - Develop advertisements to promote program	WH Recycling Coordinator	Materials Printing Distribution Collection by local hauler Advertisements \$500 - 1,000	WH County Haz. Waste Mgmt. Program	January 1993
8.5.6 - Monitoring and Reporting - Prepare and issue surveys to schools and targeted generators - Examine level of achievement of goals - Conduct cost/benefit analysis on a yearly basis	Recycling Coordinator School Recycling Coordinator	Materials Printing \$2,000 - 3,000	PD	January 1992 Annually

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PD = Planning Department

PSD = Public Services Department

WH = Waste Hauler

Section 9

Facility Capacity Component

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

Section 9

Facility Capacity Component

City of Dallas
Facility Capacity
Source: Facilities and Planning Division

Page 10 of 10
Date: 10/1/2010

SECTION 9 DISPOSAL FACILITY CAPACITY COMPONENT

Integrated waste management includes the environmentally safe disposal of solid wastes that cannot be feasibly diverted from landfilling. Because of the diminishing landfill capacity in the State of California, the Integrated Waste Management Act of 1989 requires that, in their Source Reduction and Recycling Elements, each City identify its current and future solid waste disposal capacity needs. A discussion of planned phase-outs, closures, or expansions is also included.

The Solid Waste Facility Capacity Component contains a needs projection that estimates the additional disposal capacity required to accommodate the anticipated solid waste generated within the City for a 15-year period.

9.1 Existing Permitted Solid Waste Disposal Facilities [18744.(a)]

There are no permitted solid waste disposal facilities located within the City of La Habra. Nearly all wastes generated from the City of La Habra which are not recycled or otherwise diverted are landfilled at the Olinda/Alpha Landfill. Some small amounts of wastes are likely landfilled at other facilities in Orange and Los Angeles Counties due to waste collection routing and landfill operating hours conflicts. However, these wastes are considered insignificant as they are estimated to represent less than 1% of the waste generated.

The Olinda/Alpha landfill is identified as a Class III municipal waste landfill encompassing approximately 570 acres located north of the City of Brea. The facility is owned and operated by Orange County. The Olinda/Alpha landfill is estimated by the Orange County Integrated Waste Management Department to have 20,100,000¹ cubic yards permitted disposal capacity remaining which is estimated to equal 12,100,000 tons of remaining capacity. Orange County as a region is estimated to have 207,500,000 cubic yards or 124,500,000 tons of remaining permitted landfill capacity.

1. February 1, 1991 letter to California Integrated Waste Management Board from the County of Orange, Integrated Waste Management Department.

9.1.1 Waste Types and Quantities

[18744.(a) (2)]

The quantity and type of wastes being exported from the City for disposal are described in Section 3 of this SRRE and are projected for 15 years. This data is summarized in Table 9-1.

9.2 Solid Waste Disposal Facility Needs Projection

Disposal facility needs for the city are provided in Table 9-1. As indicated, the City exports all the waste generated from within the City to County operated and maintained landfills. These landfills are funded through tipping fees established by the County to maintain the facilities and ensure adequate capacity exists.

9.3 Disposal Facility Phase-Out or Closure

No solid waste facilities exist within the City of La Habra. Therefore, no phase-outs or closures will occur.

9.4 New or Expanded Disposal Facility

Currently, there are no plans to establish a new disposal facility within the City during the short- or medium-term planning periods.

Table 9-1
City of La Habra
Solid Waste Disposal Facility Capacity Needs

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Population	51,200	51,363	51,461	51,559	51,657	51,755	51,812	51,270	51,029	50,789	50,550	50,545	50,540	50,535	50,530	50,525
Change		0.19%	0.19%	0.19%	0.19%	0.19%	-0.47%	-0.47%	-0.47%	-0.47%	-0.47%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
G - Solid Waste Generated																
Residential	32,106	32,212	32,257	32,303	32,348	32,394	32,070	31,746	31,423	31,099	30,775	30,772	30,771	30,770	30,767	30,760
Commercial	12,573	12,717	12,861	13,006	13,150	13,294	14,168	15,043	15,917	16,792	17,666	17,293	16,919	16,546	16,172	15,799
Industrial	33,634	33,681	33,728	33,775	33,822	33,869	34,038	34,207	34,375	34,544	34,713	34,852	34,991	35,130	35,268	35,407
Other	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212	23,212
Total Waste Generated	101,585	101,822	102,059	102,295	102,532	102,769	103,488	104,208	104,927	105,647	106,366	106,128	105,893	105,657	105,420	105,178
I- Solid Waste Imported	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D- Solid Waste Diverted																
Source Reduction	1,276	1,679	2,083	2,486	2,890	3,293	3,692	4,092	4,491	4,891	5,290	5,689	6,089	6,488	6,888	5,600
Recycling	18,197	19,352	20,618	21,972	30,271	30,846	32,554	34,263	35,971	37,680	39,388	41,096	42,805	44,513	46,222	37,500
Composting	0	0	0	0	0	0	0	2,000	4,050	6,700	8,175	9,810	11,445	13,080	14,714	9,000
Other	400	400	400	400	400	400	470	540	610	680	750	751	751	751	751	751
Total Waste Diverted	19,873	21,431	23,100	24,858	33,561	34,539	36,717	40,895	45,122	49,960	53,603	57,346	61,089	64,832	68,575	52,751
(% Diverted)	19.6%	21.0%	22.6%	24.3%	32.7%	33.6%	35.5%	39.2%	43.0%	47.3%	50.4%	54.0%	57.7%	61.4%	65.0%	50.2%
TC- Transformation Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LF - Landfill disposal	81,712	80,390	78,958	77,437	68,972	68,230	66,772	63,313	59,805	55,696	52,763	48,782	44,804	40,825	36,845	52,427
RPC - Remaining Permitted Capacity in Millions	207.330	206.512	205.709	204.919	204.145	203.455	202.773	202.105	201.472	200.874	200.317	199.789	199.301	198.853	198.445	198.076
E - Solid Waste Exported	81,712	80,390	78,958	77,437	68,972	68,230	66,772	63,313	59,805	55,696	52,763	48,782	44,804	40,825	36,845	52,427
Additional Capacity Needed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes

- All figures are shown in tons, which assume a conversion to cubic yards at 1.67 cubic yards = one ton
- Waste generated = waste disposed + waste diverted
- Waste Disposed and Diverted are from 15 year projections, which are based on:
 - Waste disposal and waste diversion studies conducted by the County of Orange and the City of La Habra.
 - Projected population from City of La Habra Planning Department
 - Consideration of waste diversion plans and activities for the City of La Habra
 - Inert solids (such as asphalt and concrete) which were allocated as recycled are excluded from disposal and diversion quantities for planning purposes
- Other = County allocated diversion and disposal.
- RPC refers to County-wide remaining capacity and is shown in millions of tons

Section 10

Funding Component

City of La Habra
Final Draft
Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

Section 10
Funding
Component

10.1.1.1
Funding
Source: Education and Research Institute

10.1.1.2
Funding
Source: Education and Research Institute

SECTION 10 FUNDING COMPONENT

The intent of the funding component is to ensure that the City of La Habra has adequate funds and allocation of resources to plan, develop, and implement the SRRE programs identified in this document.

This section briefly describes the following:

- Current means used to fund solid waste programs for the City
- Estimated costs for the component programs scheduled for implementation in the short-term planning period
- Additional staff reserves required to implement the programs
- Revenue sources to support the component programs
- Alternate funding sources

10.1 Current Funding Means

In general, solid waste collection and disposal costs for residential, commercial, and industrial generators within the City are funded by user fees. These fees include the costs associated with collection of wastes and disposal at permitted landfills operated by Orange County. The City regulates the collection of these waste through an exclusive franchise agreement with Western Waste Inc. in which the City bills residential customers for collection of both wastes and recyclables and the franchise bills for commercial and industrial accounts directly. Cost for administration of the franchise agreement are funded through franchise fees charged to Western Waste Inc. based upon a percentage of revenues collected by the hauler. These franchise fee funds are allocated each year by the City Council.

10.2 Estimated Program Cost

Table 10-1 summarizes the estimated costs for program planning and implementation of the selected alternatives for each component over the short-term planning period. Costs included in this table represent costs incurred by the City and include estimated private sector costs. Private sector costs are assumed adequate to fund existing ongoing private sector programs and are not further defined or broken down. It is assumed that the private sector will increase user fees as necessary to ensure ongoing program funding. The total annual costs for operation, maintenance, and vehicle and containers replacement fund contributions are estimated for each component.

SRRE Program costs include estimated cost of City staff and resources utilized. Several program costs for recycling overlap with other programs and include pooled resources. An example of these pooled resources include the cost of the recycling coordinator and support personnel. These cost are estimated at \$45,000 and are consolidated into the cost of public education component albeit the cost includes administration of curbside, MRF, and other programs. Source reduction costs reflect only costs above the estimated Education Component cost. Public Education Component costs are addressed in Section 8, Education and Public Information, and are included in Table 10-1 as a single line item. The selected programs do not require any capital investments by the City during the short-term planning period.

Table 10-1
Source Reduction and Recycling
Implementation Costs

Component	Capital Costs (\$)	Annual Cost (\$)
Source Reduction	0	9,000 - 18,500
Recycling	0	12,000 - 17,000
Composting	0	6,000 - 7,500
Special Waste	0	0
Education and Public Education *	0	70,600 - 86,500
Monitoring and Evaluation, all Programs	0	5,000 - 10,000
Total	0	98,100 - 134,500

* Includes estimated salary and benefits for recycling personnel

Note: See specific components for more detailed analysis for funding requirements.

Composting: Collection and processing costs begin in 1997 and may increase if private facilities are not available.

10.3 Additional Staff Requirements

Based upon the responsibilities discussed within the Source Reduction, Recycling, Composting, Special Wastes, and Public Education Components, it appears the City will need one full time recycling coordinator in addition to administrative support staff in order to coordinate and implement the individual component objectives. Salaries for these individuals are currently funded through both general funds and franchise fees.

Future funding of the expanded responsibilities of this position are anticipated to continue to be funded through franchise fees and/or surcharges discussed in Section 10.4.

Although the responsibilities have been delineated for a specific city staff position, it is assumed that many of the identified implementation programs may be initiated utilizing existing city staff until such time as the city can consolidate all recycling, source reduction, composting and educational programs within a single organizational structure.

Some programs identified for implementation may be performed under a contract basis with outside consultants or in conjunction with other public or private agencies such as the franchise waste hauler, material recovery facility operator, Orange County Integrated Waste Management Department, or adjacent cities.

Ideally the pooling of programs with other cities or with the County will likely reduce implementation costs significantly. However, the effectiveness and potential cost savings of this pooling cannot be estimated at this time as complete County or adjacent city programs have not been approved by their respective governing agencies. Therefore the funding requirements delineated herein should be considered an extreme worse case scenario.

The City of La Habra intends to work closely with the County in developing regional, sub-regional, and local programs which can achieve the goals of the City's SRRE in a cost effective and coordinated manner.

10.4 Revenue Sources

Several revenue sources are available to provide funding necessary to implement the selected SRRE programs. Potential revenue sources for these programs include:

- **Property taxes.** Property taxes involve those taxes that are levied on the person or corporation recorded on the deed of record. These taxes can support a variety of public services including solid waste management. Property taxes have limitations such as statutory ceilings on tax rates, competing public services such as public education, lack of income or economic activity to support higher taxes, and lack of voter support.
- **User fees.** These fees include waste collection fees and landfill fees and are essentially applied to household, commercial and industrial wastes. User fees offer a fair means of payment for waste analysis, collection, diversion and disposal. User fees assess the actual user based on weight and volume or number of containers collected instead of a flat fee and local tax-financial system.

10.5 Alternate Funding Sources

Alternate funding means that could be explored for contingency funding for the City include the following:

- **Special assessments** which can take the form of short-term taxes or assessments on businesses to develop source reduction and recycling programs.
- **Additional rate structure modification.** This involves revising the subscribed rate system based on quantity or attaching surcharges to existing waste collection and disposal fees.
- **Business license fees.** Business license fees could be increased. Private hauler license fees for collection waste in the City could be raised. These funds could then be used to implement the diversion programs.

- **State Grants.** The State of California has made grants available to cities and counties for implementation of waste diversion education and implementation.

SECTION 11. INTEGRATION COMPONENT

Section 11

Integration Component

11.1. Purpose and Scope of the Integration Component

The purpose of the integration component is to ensure that the various elements, including, but not limited to, the source reduction, recycling, and energy conservation measures, are integrated into a single, cohesive program. This component is designed to ensure that the various elements are not implemented in isolation, but rather as part of a unified strategy. The integration component is designed to ensure that the various elements are implemented in a way that is consistent with the overall goals of the program. The integration component is designed to ensure that the various elements are implemented in a way that is consistent with the overall goals of the program.

City of La Habra

Final Draft

Source Reduction and Recycling Element

Prepared By:

Kleinfelder, Inc.
Diamond Bar, California

Dated: May 27, 1991

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

Integration Component

OF THE
PHYSICAL
SCIENCE
DEPARTMENT

CHICAGO, ILLINOIS
1961

SECTION 11 INTEGRATION COMPONENT

11.1 Introduction

The intent of the integration component is to describe how the source reduction, recycling, composting, and special waste components are combined to accomplish the State-mandated diversion goals. This section provides a summary of the solid waste management practices proposed by the SRRE, explanations of how the programs work to jointly achieve the diversion mandates while maximizing feasible source reduction, recycling and composting options, and an explanation of how priorities between components were established. An integrated schedule is also provided.

11.2 Proposed Solid Waste Management Practices

The solid waste management practices described in the source reduction, recycling, composting, and special waste components of this report (Sections 4 through 7) are designed to comply with the requirements of the Integrated Waste Management Act requirements. Consistent with these requirements, the City has developed programs to promote source reduction activities targeted at decreasing the amount of solid waste being generated in the City. For other types of waste generated in the City, recycling and composting and special waste programs have been developed which will contribute to diverting wastes from disposal to the extent feasible.

The City's specific source reduction, recycling, composting, and disposal activities are designed to achieve integrated waste management mandates and are summarized in Table 11-1.

11.3 Component Integration

The source reduction, recycling, composting, and special waste components have been integrated to complement one another and achieve their maximum potential. Initially, the programs were examined on a mutually exclusive basis with objectives and target materials for each component being developed to maximize the potential waste diversion. After examining the independent components, the goals and objectives were integrated to assess additional opportunities and constraints that could affect the overall plan. The intent was

to prevent or minimize the implementation of programs that compete for specific materials or resources available. The result is an SRRE which attempts to maximize the use of all feasible source reduction, recycling, and composting options. Table 11-1 summarizes the existing diversions which are occurring and estimated diversion for the years 1995 and 2000.

Table 11-1
Projected Diversion Rates
1990 - 1995 - 2000
La Habra

Component	1990	%	1995	%	2000	%
Source Reduction						
Existing Industrial	1,276	1.24%	1,276	1.24%	1,276	1.23%
Increases by all new Source Reduction Programs	N/A	N/A	2,017	1.96%	4,014	3.86%
Recycling						
Existing Residential/Commercial/Industrial	21,677	21.09%	21,677	21.09%	18,197	17.50%
Increases by all new Recycling Programs	N/A	N/A	9,169	8.92%	20,644	19.86%
Composting						
Existing Composting	0	0.00%	0	0.00%	0	0.00%
Increases by all new Composting Programs	N/A	N/A	0	0.00%	8,175	7.86%
Special Waste						
Existing Special Waste Programs*		0.00%	0	0.00%	0	0.00%
Increases by all new Special Waste Programs*	N/A	N/A	0	0.00%	0	0.00%
Total Diversion Tons	22,953		34,139		52,306	
Total Generation / Percent Diverted	101,585	22.59%	102,769	33.22%	103,966	50.31%

* Special Waste Diversions are incorporated into Recycling Diversions

Table 11-1
Projected Diversion Rates
1995 and 2000
La Habra

Recycling	1995	%	2000	%
Existing Comm/Industrial	18,197	18.04%	18,197	18.13%
Increases by City Programs	12,649	12.54%	26,344	26.25%
Source Reduction				
Existing Industrial	1,276	1.27%	1,276	1.27%
New	2,017	2.00%	4,014	4.00%
Allocated				
All	400	0.40%	751	0.75%
Total Diversion	34,539	34.25%	50,582	50.40%
Total Generation	100,851		100,357	
Percent Diverted		34.25%		50.40%

11.5 Component Priorities

In developing the City of La Habra SRRE, priorities were established between components. These priorities were based on regulatory, technical, institutional, and economic considerations. These considerations included the following:

- Waste generation study results
- Existing waste management practices consistency (local conditions)
- Volume, weight, or hazard of targeted waste reduction effectiveness

11.6 Integrated Schedule

The integrated schedule for the short-term planning period (Table 11-2) includes implementation tasks, identification of responsible agency, and milestone dates. Based upon the integration schedule the City is expected to achieve its State-mandated diversion goal before the third quarter of 1994.

Table 11-2

SRRE Integration Component Implementation Schedule Plan

Alternative Program	Responsible Agency/Person	Year									Estimated Imp. Cost	Public Revenues	Available Revenue Sources	
		1991	1992	1993	1994	1995	1996	1997	1999	2000				
SOURCE REDUCTION														
Technical Assistance for Businesses	RC, PC, PD, CM, CC	Ongoing Program -> -----									2,000 - 4,000			
Local Procurement Policy (Ordinances/Policies)	RC, PC, PD, Purch, CM, CC	Ongoing Program -> -----									3,000-5,000			
Awards and Public Recognition	RC, PC, PD, CM, CC	Ongoing Program -> -----									1,500-2,000			
Non-Procurement Program	RC, PC, PD, CM, CC	Ongoing Program -> -----									3,500-5,000			
Solid Waste Reduction Business Plans	RC, PC, PD, CM, CC	Ongoing Program -> -----									6,500-11,000			
Educational Programs	RC, PC, PD, CM, CC	Ongoing Program -> -----									4,000-8,000			
Waste Evaluations	RC, PC, PD, CM, CC	Ongoing Program -> -----									12,000-15,000			
RECYCLING														
Unstaffed DOC Promotion	RC, PC, PD, CM, CC	Ongoing Program -> -----									10,000-15,000			
Certified recycling Center Promotion	RC, PC, PD, CM, CC	Ongoing Program -> -----									7,000-10,000			
City Agency Recycling Program	RC, PC, PD, CM, CC	Ongoing Program -> -----									7,500-9,000			
MRF Front Loader Wastes	RC, PC, PD, CM, CC	Ongoing Program -> -----									5,000			
Salvaging		Ongoing Program -> -----									3,000-5,000			
COMPOSTING														
Curbside Collection of Green Waste	RC, PC, PD, CM, CC	Ongoing Program -> -----									5,000			
Centralized Waste Processing	RC, PC, PD, CM, CC	Ongoing Program -> -----									6,000			
County Owned Process/Composting Facility	RC, PC, PD, CM, CC	Ongoing Program -> -----												
SPECIAL WASTE														
Tire Shredding and Recycling	IWMD, PW, RC	Ongoing Program -> -----									Tipping Fees	Tipping Fees		
C/D Private Facility	IWMD, Co, EMA, DOHS	Ongoing Program -> -----									5,000			
Infectious Waste Program	Co, MCA EMD, DOHS	Ongoing Program -> -----									Tipping Fees	Tipping Fees		
Asbestos Waste landfilling	IWMD, DOHS, PW	Ongoing Program -> -----									Tipping Fees	Tipping Fees		
PUBLIC EDUCATION AND INFORMATION														
Recycling Coordinator Designation	RC, CM, CC	Ongoing Program -> -----									45,000			
Public Information Resource Development	RC, CM, CC	Ongoing Program -> -----									2,000			
Public Official Program	RC, CM, CC	Ongoing Program -> -----									3,000-5,000			
Recycling Day	RC, CM, CC	Ongoing Program -> -----									1,500-3,000			
Community Outreach	RC, CM, CC	Ongoing Program -> -----									500-1,000			
Public Tours	RC, CM, CC	Ongoing Program -> -----									500-1,000			
Recycling Newsletter	RC, CM, CC	Ongoing Program -> -----									500-1,000			
Public Information Center	RC, CM, CC	Ongoing Program -> -----									2,500-3,000			
Speaker's Bureau	RC, CM, CC	Ongoing Program -> -----									2,000-3,000			
Business Training Sessions	RC, CM, CC	Ongoing Program -> -----									7,100-9,000			
Media Campaign	RC, CM, CC	Ongoing Program -> -----									500-1000			
School Recycling Coordinator	RC, CM, CC	Ongoing Program -> -----									500-1,500			

Table 11-2
SRRE Integration Component Implementation Schedule Plan

SAGE Integration Component Implementation Schedule											Estimated Imp.	Public Revenues	Available Revenue Sources
Alternative Program	Responsible Agency/Person	Year									Cost		
		1991	1992	1993	1994	1995	1996	1997	1999	2000			
Classroom Recycling Programs	RC,CM,CC		Ongoing Program ->								500-1,000		
School Media Program	RC,CM,CC		Ongoing Program ->								500-1,000		
School EQAC	RC,CM,CC		Ongoing Program ->								500-700		
Composting 'How To'	RC,CM,CC		Ongoing Program ->								2500-4,000		
Household Battery Collection	RC,CM,CC		Ongoing Program ->								500-1,000		

